

‘An Arabic Qur’ān, That You Might Understand’

Qur’ān Fragments in the T-S Arabic Cairo Genizah Collection

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Abstract

The Arabic-script Qur’ān fragments of the Cairo genizah collections have not yet drawn much interest among Arabic and genizah scholars. This paper aims to bring them to the attention of a broader audience by presenting the palaeographic features (§ 3) and vocalisation systems (§ 4) of eleven Arabic-script Qur’ān fragments from the Cambridge University Library’s Taylor-Schechter Arabic collection. While the focus of this paper is the physical appearance of these Qur’ān leaves, their presence in the Cairo genizah (§ 1.1)—a Jewish ‘storeroom’ for retired sacred texts—is also tentatively explored (§ 1.2, § 5).

Keywords

Qur’ān fragments – Cairo genizah – Arabic – Arabic palaeography – vocalisation signs

1 Introduction¹

1.1 *The Cairo Genizah*²

The Hebrew word *genizah* (pl. *genizōt*) is often translated as 'storeroom,' though it more literally means 'hiding away.'³ It is common practice among Jewish⁴ communities to place texts which are no longer in use, but which are considered sacred (typically due to the inclusion of the name of God or the Hebrew script) in a synagogue's genizah. Once full, the contents of the storerooms are usually buried to protect them from desecration.⁵

In the early medieval period, al-Fuṣṭāṭ's Palestinian synagogue (known as the Ben 'Ezra Synagogue) was a vibrant focal point of the Jewish community,⁶ and possessed a genizah. Due to plague, famine, intermittent persecution (Courbage and Fargues [1997] 2018:19), and the emigration of wealthier Jews to the burgeoning Cairo (Rustow 2008), the Ben 'Ezra Synagogue had fallen into relative disuse by the turn of the fourteenth century (Jefferson 2018:426).⁷ This decline continued, and by the seventeenth century, the Ben 'Ezra Synagogue saw only sporadic services and the occasional pilgrim (Reif 2000:14; Jefferson 2018:428).⁸ Scholars and travellers who visited al-Fuṣṭāṭ make few allusions to the Ben 'Ezra Synagogue's genizah between the fifteenth and mid-nineteenth centuries (Jefferson 2018:429), and there is scant record of admittance for a foreigner before Jacob Sapir in 1864 (Jefferson 2018:433). Thereafter, rumours

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2 For introductions to the Cairo genizah collections, see Reif (2000); and Hoffman and Cole (2011).

3 From the root *gnz*, 'storing up, reserving' (Jastrow 1926:258).

4 A similar phenomenon occurs in Muslim and Christian communities in the Arab world. The Umayyad Mosque in Damascus and the 'Amr b. al-ʿĀṣ Mosque in al-Fuṣṭāṭ both had storerooms for religious texts no longer fit for circulation (Déroche 1992:12–13; James 1992:12). The upper storey of Ṣanʿā's Great Mosque contained approximately 40,000 Qurʾān fragments (Blair 2006:101).

5 It is not yet known whether the Ben 'Ezra Synagogue's genizah was periodically cleared and re-filled. The discovery of late ninth-century papyri documents indicates that it was not emptied. However, Jefferson's suggestion that additional material from other local *genizōt* may have been added to the Ben 'Ezra Synagogue's genizah between 1889 and 1892 throws this evidence into doubt (2018:426–427, 433–434, 444).

6 The Jewish community in ninth- and tenth-century Egypt accounted for approximately one per cent of the total population (Courbage and Fargues [1997] 2018:16).

7 The majority of texts found in the Cairo genizah collections date between the eleventh and thirteenth centuries; the Ben 'Ezra Synagogue's 'heyday' (Loveday 2001:25; Jefferson 2018:426).

8 When the Ben 'Ezra Synagogue's genizah was sealed off in the fifteenth century, its officials made a rooftop opening to allow for further deposits of texts (Jefferson 2018:427), suggesting that they expected further submissions.

about the Ben 'Ezra Synagogue's genizah gradually gained traction, and when the storeroom was emptied for the synagogue's reconstruction in 1889,⁹ westerners' interest in the genizah had been piqued.

In 1896, while travelling in Egypt, twin-sisters Margaret D. Gibson (1843–1920) and Agnes S. Lewis (1843–1926) acquired a Hebrew manuscript, reportedly from the Ben 'Ezra Synagogue's genizah. On their return to England, Gibson and Lewis brought this manuscript to their friend, Solomon Schechter (1847–1915), then Reader in Rabbinics at the University of Cambridge. Schechter identified it as the Hebrew edition of Ben Sira,¹⁰ a text previously only found in Syriac and Greek renditions¹¹ (Hoffman and Cole 2011: 11). Schechter rapidly arranged a trip to Egypt, arriving in Cairo by December 1896, and with the permission of Cairo's Chief Rabbi, Aaron b. Simon (Hoffman and Cole 2011:73), he sifted through the Ben 'Ezra Synagogue's genizah. In 1897, he returned to Cambridge with eight wooden tea crates, all stuffed with fragments (ibid.: 78).

The manuscripts and fragments attributed to the Ben 'Ezra Synagogue's genizah number approximately 300,000, of which roughly 190,000 now reside in the Cambridge University Library. The remaining fragments are scattered among various institutions, including the Bodleian Library, Oxford; the national libraries of France and Israel; the Jewish Theological Seminary, New York; the British Library, London; the University of Manchester's John Rylands collection; and a number of small, private collections (Reif 2000:17–18).

The Cairo genizah collections remain an invaluable—and in some areas under-utilised—resource for scholars interested in biblical studies, economic and social history, medieval medicine, Semitic philology, and many areas besides. The collections contain Hebrew, Judaeo-Arabic, Arabic, Aramaic, Syriac, Coptic and Judaeo-Spanish texts, and comprise more genres than can be listed here. Among these texts are a small number of Arabic-script Qur'ān fragments.

1.2 *Arabic-Script Fragments in the Cambridge Cairo Genizah Collections*

The Arabic-script component of the Cambridge genizah collections is relatively slight in comparison to their Hebrew and Judaeo-Arabic contents. It is estimated that the collections contain roughly 7,000 Arabic-script fragments,

9 There is no clear record of what happened to the genizah's contents during the rebuilding process, a fact which has led Jefferson to suggest that the genizah Schechter encountered in 1897 was much altered from its pre-1889 state (Jefferson 2018:444).

10 Also known as Ecclesiasticus.

11 <http://www.lib.cam.ac.uk/Taylor-Schechter/lewis-and-gibson.html>.

approximately four per cent of the total 190,000 (Khan 1986:54).¹² We have chosen to focus on the Qur'ān fragments in the Taylor-Schechter Arabic (henceforth T-S Ar.) collection, as they constitute a manageable-sized corpus for an initial study.¹³

As Geoffrey Khan remarks (1986:54), the presence of Arabic-script fragments in the Cairo Genizah is somewhat puzzling. Following Shelomo D. Goitein's suggestion (1967:14), he proposes that the Arabic-script texts may have once formed parts of personal collections, which predominantly comprised Hebrew texts. When their owners moved or died, the collections were disposed of in the synagogue's genizah, irrespective of their contents (Khan 1986:54). However, many (if not all) of the Arabic-script fragments—legal documents, letters and literary texts alike—contain the *basmala* or similar reference to God, which may have warranted their storage in the genizah.

With regard to the Arabic-script Qur'ān fragments, we are confronted not only with the question of why they are found in the genizah, but also whether they were indeed owned by Jews, and if so, for what purpose? As none of the fragments under consideration contain a colophon or any other indication of ownership, attempts to address the former question may appear speculative. However, the presence of Judaeo-Arabic Qur'ān fragments in the synagogue's genizah indicates that at least some of the Jewish community did engage with the Qur'ān's teachings directly, either in Judaeo-Arabic transcription¹⁴ or in Arabic script.

The size and style of the T-S Ar. fragments indicate that they were probably used for private study. While none of the them could be described as 'model' Qur'āns, neither are they obviously or intentionally damaged. With the exception of a few marginal jottings in the form of the *basmala* and *ḥamdala* and the occasional correction, the fragments are largely unmarked.

The ensuing sections will introduce each fragment with a brief codicological summary (§ 2), followed by more detailed descriptions of their palaeography (§ 3) and vocalisation systems (§ 4).

12 Khan cites a different figure of 7,000 out of 140,000 (approximately five per cent) (1986:54), but after three more decades of Genizah research, we now have a better idea of the total number of fragments in the Cambridge collections (see Friedberg Genizah Project <https://fjms.genizah.org/?lang=eng> for details).

13 Additional Qur'ān fragments are found in the Taylor-Schechter New Series, as well as other collections (see, e.g., T-S NS 183.79; T-S NS 192.11a, T-S NS 192.11b and T-S NS 192.11c; and T-S NS 306.145).

14 See Paudice (2009).

2 Eleven Arabic-Script Qurʾān Fragments

The fragments are ordered here according to their classmarks in ascending order:

- | | |
|--------------------|---------------------|
| (i) T-S Ar.19.7 | (vii) T-S Ar.41.84 |
| (ii) T-S Ar.38.8 | (viii) T-S Ar.41.93 |
| (iii) T-S Ar.38.39 | (ix) T-S Ar.41.119 |
| (iv) T-S Ar.38.64 | (x) T-S Ar.42.145 |
| (v) T-S Ar.40.97 | (xi) T-S Ar.42.193 |
| (vi) T-S Ar.40.177 | |

2.1 Preliminary Physical Descriptions

- (1) T-S Ar.19.7

<i>Content</i>	Qurʾān 2:255	
<i>Material; condition</i>	Paper; one leaf; badly torn, holes, slightly rubbed, slightly stained, horizontal laid lines, vertical chain lines	
<i>Dimensions</i>	<i>Page</i>	13.7 × 22.7 cm
	<i>Written area</i>	13.7 × 20.2 cm; two lines + marginalia (recto; verso is blank)
<i>Script</i>	<i>Script</i>	<i>Tuluṭ</i>
	<i>Hands</i>	Two hands (second hand rubricated)
	<i>Letter-pointing</i>	Graphemes are partially pointed with diacritical dots
	<i>Vocalisation</i>	Partial modern vocalisation ¹⁵
<i>Inks</i>	Polychrome; black ink	
	Some words in red (second hand); some spaces between letters filled with red ink, almost haphazardly	
<i>Format</i>	Unknown	

15 For explanations of the vocalisation systems, see § 4.

(II) T-S Ar.38.8

<i>Content</i>		Qur'ān 11:43–50
<i>Material</i>		Parchment; one leaf; holes, slightly rubbed, slightly stained, recto is hair side
<i>Dimensions</i>	<i>Page</i>	10.2 × 15.2 cm
	<i>Written area</i>	5.4 × 9.7 cm; eight lines (recto); eight lines (verso)
<i>Script</i>	<i>Script</i>	Abbasid bookhand
	<i>Hands</i>	One hand
	<i>Letter-pointing</i>	Graphemes are only sporadically pointed with diacritical dots
	<i>Vocalisation</i>	Partial red-dot vocalisation
<i>Inks</i>		Polychrome; brown ink Red vocalisation dots
<i>Format</i>		Horizontal

(III) T-S Ar.38.39

<i>Content</i>		Qur'ān 17:31–50; 18:10–27
<i>Material; condition</i>		Parchment; one leaf, with stub attached; torn, holes, rubbed, stained, water-damage, verso is hair side
<i>Dimensions</i>	<i>Page</i>	10.7 × 19.7 cm
	<i>Written area</i>	9.3 × 13.1 cm; 11 lines (recto); 13 lines (verso)
<i>Script</i>	<i>Script</i>	Mixed style; possibly <i>nashī</i> , with elements of <i>magribī</i> script
	<i>Hands</i>	One hand
	<i>Letter-pointing</i>	Unpointed
	<i>Vocalisation</i>	Unvocalised
<i>Inks</i>		Monochrome; black ink
<i>Format</i>		Horizontal

(iv) T-S Ar.38.64

<i>Content</i>		Qurʾān 77:27–50; 78:1–12; 79:40–46; 80:1–37
<i>Material</i>		Parchment; two leaves (bifolium); torn, holes, rubbed, stained, F1 recto and F2 verso are hair side; evidence of binding
<i>Dimensions</i>	<i>Page</i>	12.8 × 29.9 cm
	<i>Written area</i>	9.3 × 14.6 cm/15.3 cm; seven lines per leaf
<i>Script</i>	<i>Script</i>	<i>Maǧribī</i> (<i>mabsūt</i>); Early Abbasid script (sub-headings)
	<i>Hands</i>	One hand
	<i>Letter-pointing</i>	Graphemes are frequently pointed with diacritical dots; <i>fāʾ</i> is pointed with a sublinear dot, <i>qāf</i> with a single supralinear dot
	<i>Vocalisation</i>	Partial <i>maǧribī</i> vocalisation
<i>Inks</i>		Polychrome; brown ink; gold sub-headings, with outline
		Red vocalisation signs
<i>Format</i>		Horizontal
<i>Decoration</i>		End of an <i>āya</i> ('verse') is marked with three small dots in a triangular formation

(v) T-S Ar.40.97

<i>Content</i>		Qurʾān 96:10–19; 97; 98:1–6a
<i>Material</i>		Paper; one leaf, with stub attached; torn, holes, slightly rubbed, slightly faded, stained, vertical laid lines; evidence of binding
<i>Dimensions</i>	<i>Page</i>	13.7 × 10.5 cm
	<i>Written area</i>	10 × 6.5 cm; nine lines (recto); 11 lines (verso)
<i>Script</i>	<i>Script</i>	<i>Nashī</i> (main text); <i>tawqīʿ</i> (second hand)
	<i>Hands</i>	Two hands; one for recto and verso verses; and one for recto optative formulas
	<i>Letter-pointing</i>	Graphemes are frequently (but inconsistently) pointed with diacritical dots
	<i>Vocalisation</i>	Partial modern vocalisation
<i>Inks</i>		Monochrome; black ink
<i>Format</i>		Vertical

(vi) T-S Ar.40.177

<i>Content</i>		Qur'ān 2:177–188; 2:235–247
<i>Material</i>		Paper; two leaves (bifolium); torn, holes, slightly rubbed, slightly stained, folded three times horizontally, pattern-less; evidence of binding
<i>Dimensions</i>	<i>Page</i>	10.4 × 17.3 cm
	<i>Written area</i>	8.2 × 7 cm; 19–20 lines + marginalia
<i>Script</i>	<i>Script</i>	NS.I, with NS.III features
	<i>Hands</i>	One hand
	<i>Letter-pointing</i>	Graphemes are sporadically pointed with diacritical dots
	<i>Vocalisation</i>	Partial red-dot vocalisation
<i>Inks</i>		Polychrome; black ink Red dots for vocalisation signs; last four lines of F2 verso the red ink has smudged noticeably. The black ink of the consonants is unaffected, suggesting that the red dots were added after the black ink had set.
<i>Format</i>		Vertical
<i>Decoration</i>		Floral/circular filled in verse markers

(vii) T-S Ar.41.84¹⁶

<i>Content</i>		recto: Qur'ān 1:1–7, followed by Qur'ān 114:1–109:5 in reverse order; verso: Qur'ān 108:1–103:3 in reverse order; text is inverted, such that it appears upside-down when the page is turned from the recto
<i>Material</i>		Paper; one leaf; torn, holes, slightly rubbed; slightly stained, vertical laid lines
<i>Dimensions</i>	<i>Page</i>	21.2 × 16.9 cm
	<i>Written area</i>	20.5 × 15.2 cm; 12 lines (recto); 15 lines (verso)
<i>Script</i>	<i>Script</i>	<i>Nashī</i>
	<i>Hands</i>	One hand

¹⁶ This fragment is mentioned in Khan 1986:60, n. 35.

(cont.)

	<i>Letter-pointing</i>	Graphemes are frequently pointed with diacritical dots
	<i>Vocalisation</i>	Isolated modern vocalisation
<i>Inks</i>		Monochrome; black ink
<i>Format</i>		Vertical
<i>Decoration</i>		Two or three consecutive <i>hā</i> 's mark the end of an <i>āya</i>

(VIII) T-S Ar.41.93¹⁷

<i>Content</i>		Qur'ān 2:29–34
<i>Material</i>		Paper; one leaf; torn, slightly stained, patternless
<i>Dimensions</i>	<i>Page</i>	20.8 × 16.8 cm
	<i>Written area</i>	14.2 × 9.3 cm; nine lines + marginalia (recto); seven lines + catchword (verso)
<i>Script</i>	<i>Script</i>	<i>Nashī</i>
	<i>Hands</i>	Two hands (second hand in red)
	<i>Letter-pointing</i>	Graphemes are consistently pointed with diacritical dots
	<i>Vocalisation</i>	Isolated, modern vocalisation in red ink
<i>Inks</i>		Polychrome; black ink Some red text in recto margin; isolated use of red vocalisation signs (recto)
<i>Format</i>		Vertical

(IX) T-S Ar.41.119

<i>Content</i>		Qur'ān 17:47–57
<i>Material</i>		Paper; one leaf; slightly torn, holes, slightly rubbed, slightly stained, folded once horizontally in the centre, horizontal laid lines

¹⁷ This fragment belongs with T-S NS 192.11a, T-S NS 192.11b and T-S NS 192.11c (Our thanks to Estara Arrant for pointing this out). It also physically joins to T-S NS 306.145.

(cont.)

<i>Dimensions</i>	<i>Page</i>	24.7 × 17.7 cm;
	<i>Written area</i>	18.6 × 12.2 cm; nine lines + marginalia (recto); nine lines (verso)
<i>Script</i>	<i>Script</i>	<i>Muḥaqqaq</i> (<i>maṣāḥif</i>)
	<i>Hands</i>	One hand
	<i>Letter-pointing</i>	Graphemes are consistently pointed with diacritical dots
	<i>Vocalisation</i>	Full modern vocalisation
<i>Inks</i>		Monochrome; brown ink
<i>Format</i>		Vertical
<i>Decoration</i>		One floral/circular design (recto)

(x) T-S Ar.42.145

<i>Content</i>		Qur'ān 36:1–26; 37:12–64; 37: 121–138
<i>Material</i>		Paper; four leaves (two bifolia); torn, holes, rubbed, stained, vertical laid lines horizontal chain lines
<i>Dimensions</i>	<i>Page</i>	21.5 × 31.6 cm
	<i>Written area</i>	16.8 × 11.3 cm/page; 10–11 lines; 14.1 × 9.4 cm (F ₁ , recto and F ₄ verso)
<i>Script</i>	<i>Script</i>	<i>Nashī</i>
	<i>Hands</i>	Two different hands
	<i>Letter-pointing</i>	Graphemes are consistently pointed with diacritical dots
	<i>Vocalisation</i>	Full modern Arabic vocalisation
<i>Inks</i>		Monochrome: black/brown ink
<i>Format</i>		Vertical

(xi) T-S Ar.42.193

<i>Content</i>		Qur'ān 20:109–21:35
<i>Material</i>		Paper; two leaves (bifolium); torn, holes, badly rubbed, badly stained, vertical laid lines
<i>Dimensions</i>	<i>Page</i>	24.9 × 34.1 cm
	<i>Written area</i>	20.7 × 12.4 cm; 19–20 lines

(cont.)

<i>Script</i>	<i>Script</i>	<i>Nashī</i>
	<i>Hands</i>	Two hands; one for the main text, one for additional vocalisation signs
	<i>Letter-pointing</i>	Graphemes are frequently (but not consistently) pointed with diacritical dots; <i>yā'</i> and <i>ḡim</i> often unmarked in all positions
<i>Inks</i>	<i>Vocalisation</i>	Partial to full vocalisation, some vocalisation signs in black ink, some in brown ink
		Polychrome; black ink (main text, vocalisation signs); brown ink (vocalisation signs)
		Red dots separate verses
<i>Format</i>		Vertical
<i>Decoration</i>		Large red dots separate verses

2.2 Codicology

Scribes throughout the early Islamicate world composed Qurʾāns on vertical-format parchment (Loveday 2001:9, 15) and papyrus,¹⁸ but during the tenth century, a horizontal format displaced the vertical (Déroche 1992:17; Gruendler 2001:142).¹⁹ Horizontal-shaped parchment then dominated Qurʾān production until the early eleventh century, when scribes in Iran and Iraq began copying the Qurʾān on paper²⁰ (James 1992:14; Sijpesteijn 2008:519). Until then, paper had been the preserve of documents, but its relatively low production cost (ibid.: 519; Gacek 2012:186), comparative ease of preparation (Loveday 2001:23), and the indelibility of ink on paper as compared to parchment (Blair 2006:45) all contributed to its growing popularity. This development spread westward, reaching Egypt by the mid-eleventh century, but while Egyptian scribes were

18 Papyrus continued to be used in Egypt for administrative matters until the mid-tenth century (Khan 1992:23; 2007:33; Blair 2006:41; Gacek 2012:193), with parchment being reserved, on the whole, for Qurʾāns and literary texts. Meanwhile, in the eastern Abbasid provinces, paper had already supplanted papyrus in administrative circles by the mid-ninth century. It is therefore unsurprising that paper was more readily adopted in the eastern provinces than in the more westerly regions for Qurʾān composition.

19 See e.g., the Palermo Qurʾān (QUR26, QUR368) and Istanbul’s Nuruosmaniye Library MS23, dated 982–983.

20 Déroche states that the oldest paper Qurʾān dates to the early tenth century (1992:17), but he gives no classmark. He is perhaps referring to al-Rāzī’s transcription, dated 971–972 (Blair 2006:46; 2007:601).

quick to adopt the new medium, parchment remained the preferred Qur'ān material in the Mağrib for several centuries (Déroche 1992:17; Blair 2006:46). This eleventh-century shift in medium was accompanied by a reversion to vertical formats (Déroche 1992:18; James 1992:14), but the Mağrib again resisted the eastern trend, and from the eleventh century onwards *mağribī* Qur'āns were generally cut in square format (James 1992:14, 89).

Eight of the eleven fragments examined here are written on paper in a vertical format (T-S Ar.19.7; T-S Ar.40.97; T-S Ar.40.177; T-S Ar.41.84; T-S Ar.41.93, T-S Ar.41.119; T-S Ar.42.145; and T-S Ar.42.193).²¹ Conversely, the three Qur'ān fragments composed on parchment are all cut in a horizontal format (T-S Ar.38.8, T-S Ar.38.39 and T-S Ar.38.64).

Three of the paper fragments exhibit vertical laid lines (T-S Ar.40.97, T-S Ar.41.84 and T-S Ar.42.193), one horizontal laid lines (T-S Ar.41.119), one vertical laid lines with horizontal chain lines (T-S Ar.42.145), and one horizontal laid lines with vertical chain lines (T-S Ar.19.7). These lines suggest that they were all produced using laid moulds (Loveday 2001:34–35; Gacek 2012:139, 187). Neither of the two remaining paper fragments (T-S Ar.40.177 and T-S Ar.41.193) have discernible lines, but they do have perceptible fibres. The former was prepared using the more rudimentary wove mould (Loveday 2001:34; Gacek 2012:187), while the latter—which can be confidently dated to the late nineteenth century (Posegay, 2020)—is industrially-produced paper.

3 Palaeography²²

This small selection of Qur'ān fragments contains a wide array of script-styles,²³ including Abbasid bookhand, 'New Style' scripts, and *mağribī*, *nashī*, *muḥaqqaq* and *tulut* scripts. Our descriptions follow the loose chronological development of script-types presented by Déroche (1992), Gruendler (2001), Blair (2006) and Sijpesteijn (2008), but this order is not a comment on the fragments' temporal origins.

21 There is one possible exception to this, but T-S Ar.19.7 is so badly torn that its original format can only be guessed at.

22 We have relied on Déroche (1992) and Gacek (2012) for the terminology used here to describe the palaeographical styles encountered in these manuscripts.

23 As Khan (1992:44–45) remarks, differentiating among script-styles, particularly in documentary texts, can be extremely challenging. Furthermore, present-day terms, such as *nashī* and *mağribī* still require much refining.

Ḥiǧāzī script and the 'Early Abbasid scripts',²⁴ used for Qur'ān transcriptions from the seventh and eighth centuries onwards, do not appear in T-S Ar.²⁵ However, two fragments contain script-styles that resemble Abbasid bookhand (T-S Ar.38.8) and New Style²⁶ (T-S Ar.40.177) scripts (see Déroche 1992:134–183). Abbasid bookhand refers to script-styles used for administrative purposes during the ninth and tenth centuries (Blair 2006:146, 150; Gacek 2008a:110; 2012:1, fig. 1). Gacek calls New Style I (henceforth NS.I) and New Style III (henceforth NS.III) 'dressed-up ... version[s] of the Abbasid bookhand' (2008a:110; 2012:1–2), and they are attested in Qur'ān production between the tenth and thirteenth centuries (Déroche 1992:134; Blair 2006:151).

Abbasid bookhand, NS.I and NS.III are precursors of *maǧribī* script-styles (Gacek 2008a:110; 2012:1–2). The term *maǧribī* is currently applied to script-styles used in southern Spain, the Maǧrib, and sub-Saharan Africa from approximately the tenth century onwards (Abbott 1939:41; Blair 2006:223; Gacek 2008a:110–111).²⁷ Two distinct types of classification are currently in use; one is geographically determined,²⁸ while the other differentiates based on stylistic disparities (Gacek 2008a:112; 2012:149). T-S Ar.38.64 is written in *maǧribī* script.

Of the eleven T-S Ar. Qur'ān fragments, five exhibit *nashī* script-styles (T-S Ar.40.97, T-S Ar.41.84, T-S Ar.41.93, T-S Ar.42.145 and T-S Ar.42.193). The term *nashī* ('related to copying; transcription') is commonly employed in western scholarship to refer to smaller, cursive scripts (Sijpesteijn 2008:518–519) first deployed during the 'earlier Muslim centuries' (Gacek 2008c:339). However, the classification is plagued by ambiguity, and it has been variously designated both a rectilinear (Blair 2006:226) and curvilinear script (Gacek 2008c:340; 2012:162–163). *Nashī* styles appear in Qur'ān production from the early eleventh century (see e.g., James 1992:22; Sijpesteijn 2008:519), and were some of the most common script-styles for copying Qur'āns under the Mamluks (Blair 2006:336) and Ottomans (Mansour 2011:31).

24 Déroche introduced this term to replace 'kufic', which he considers outdated and too geographically limited to be useful (1992:11).

25 With the exception of T-S Ar.38.64, in which *sūra* headings are in an Early Abbasid script style (akin to Déroche's C.I.a and D.IV).

26 Blair rejects the terms NS.I and NS.III in favour of 'broken cursive' (Blair 2006:144; 2007:601).

27 Khan (2014) demonstrates that these curvilinear script-styles originated in the eastern provinces, and were probably the result of Pahlavi-influenced cursive script-styles. They are attested in eighth-century documents from Khurasan, gradually spread from east to west during the ninth century, and became dominant thereafter (2014:283, 290–291).

28 Both Houdas (1886) and Abbott (1939) differentiate between script-styles on the basis of geographical location (Gacek 2008a:112), which Blair objects to (see 2006:221–222).

Scribes used *muḥaqqaq* ('accurate; indubitable') to transcribe large and medium-sized Qur'āns from approximately the eleventh century (Blair 2006: 171; Gacek 2008b:307; Mansour 2011:32). It is renowned for its tall, rectilinear ascenders and diagonal, tapered descenders. The terms *ǧalīl* ('broad') and *ḥafīf* ('light') refer to larger or smaller varieties, respectively. T-S Ar.41.119 resembles one of these 'light' styles, known as *maṣāḥif* (lit. 'codices,' i.e. Qur'āns).

T-S Ar. 19.7 has a *tulūṭ* (lit. 'a third') script-style, a type notable for its large size, hairlines, and deep curves (Gacek 2009:560). It was often favoured in headings, colophons and inscriptions (Blair 2006:336; Mansour 2011:30).

3.1 *Abbasid Bookhand and 'New Style' Scripts*²⁹

3.1.1 T-S Ar.38.8

The text is written in a small hand, along a straight, un-scored textline, with curved descenders and a mixture of curved and straight ascenders that slant slightly leftwards. The ascenders sometimes sport left-side head-serifs. There is little differentiation between thick and thin lines, indicating that the scribe wrote with a round-cut calamus, a soft reed commonly used in the Maǧrib (Abbott 1939:42; Gacek 2008a:111; 2012:40–41). There is a mix of open and closed counters.

The script closely resembles that found in *Kitāb Ġarīb al-Ḥadīṭ*,³⁰ of which folio 241 is dated to 252/866 (Witkam 2015:383–385; see also Blair 2006:146, 150; Gacek 2012:1). The two texts resemble each other in their 's'-shaped *alifs*; initial, medial and final *kāf*; *lām-alif warrāqīyya*; word-spacing; the breaking-up of words at the end of a line; and the relative absence of shading. These elements, combined with the fragment's horizontal format, may indicate a late ninth/early tenth-century date.

3.1.1.1 Alif

Individual *alif* (fig. 1) ranges from a vertical shaft, which sometimes has a left-leaning head and tapers towards the bottom (red), to a shaft with a hint of a central curve and a small left-turned foot (green), a curvaceous line with a bend in the middle (black), or an inverted 's'-shape with a left-side head-serif (white). The medial form sometimes protrudes below the textline (blue), and its head occasionally leans left. *Alif*'s height varies throughout.

29 Our initial survey of each fragment comprised a description of every grapheme. This, however, resulted in a text that more closely resembled a monograph than a journal article. As such, we have included descriptions of a selection of graphemes that encapsulate the most distinctive features of each style.

30 Leiden University library (MS Or. 298). Only ff. 241a–b of the manuscript are dated with certainty.

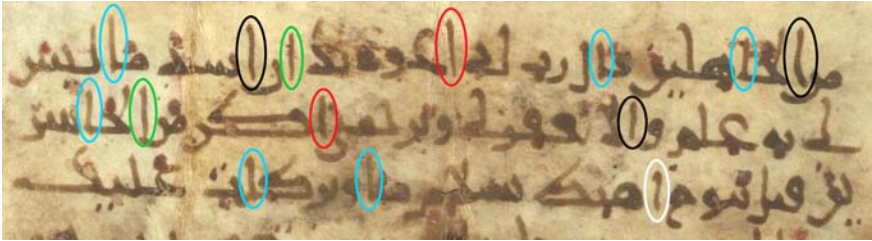


FIGURE 1 T-S Ar.38.8,v.1–3

3.1.1.2 ‘Ayn/Ġayn

Initial ‘*ayn/ġayn* has a horizontal baseline and a large curved arm which points downwards (red). It differs from ns.i in its shorter baseline and more rounded arm. Medial form is a triangular shape, ‘resting on its tip’ (Déroche 1992:136). No feature distinguishes medial ‘*ayn/ġayn* from medial *fā/qāf*.



FIGURE 2
T-S Ar.38.8,v.8

3.1.1.3 Kāf

Kāf’s width appears to be determined by the availability of space, elongating where possible. In initial position, an angular ‘s’-shaped *kāf*’ (green) (i.e. *kāf mabsūṭa*, Gacek 2012:243, 275) occurs. The ‘s’-shape is retained in final form (red), but it is more curvilinear and compressed than in initial-word position.

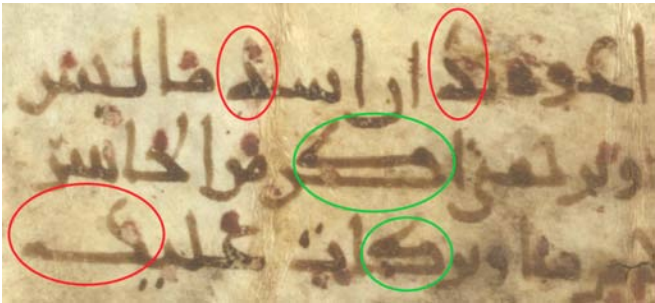


FIGURE 3
T-S Ar.38.8,v.1–3

3.1.1.4 Mīm

In initial (red) and medial (blue) forms, *mīm* is rounded, resembling the Early Abbasid Script d.i. However, unlike d.i, final-form *mīm* (green) has a vertical tail. Here, the rounded head rests on a horizontal baseline, which extends leftwards, before descending in a short, oblique curve.



FIGURE 4
T-S Ar.38.8, v.4

3.1.1.5 Hā'

Initial *hā'* (red) varies; sometimes it is a closed, cursive (approximate) circle, with a line that cuts through its centre. This form is known as *wağh al-hirr* ('the cat's face'). In other places, the circle is broken, and the outer arm forms a 45-degree angle around an inner circle. A closed-counter *hā' mardūfa* is used in final form (green), and an upturned teardrop appears in isolation (blue).



FIGURE 5
T-S Ar.38.8, v.5-7

3.1.1.6 Yā'

Final *yā' muḥaqqqa* (fig. 6) and *yā' mardūda* (fig. 7) are used interchangeably.



FIGURE 6
T-S Ar.38.8, v.4



FIGURE 7
T-S Ar.38.8, v.7

3.1.1.7 Lām-Alif Ligature

The two arms of the angular *lām-alif warrāqīya* curve slightly to the left, with the right arm curving downwards at the top.



FIGURE 8
T-S Ar.38.8, r.2

3.1.2 T-S Ar.40.177³¹

The fragment's small, angular hand adheres to NS.I principles, but there are hints of the more curvilinear NS.III. A straight (un-ruled) writing-line is maintained throughout, with all letters sitting on the textline. Descenders tend towards the curvilinear, while ascenders sometimes curve rightwards. The rectilinear aspect is most apparent in the heads of *wāw*, initial *qāf* and *fā'* and final *hā'*. There is little evidence of shading, and head-serifs occur only occasionally (red, fig. 9). Counters are usually open.

3.1.2.1 Alif

Isolated *alif* alternates between three main forms: an infrequent, curved shaft (red), with left-side head-serif and right-hooked foot, reminiscent of the Early Abbasid style B.11 (see Déroche 1992:136); the same curved shaft, with a right-turned foot but no head-serif (white); and a straight shaft (black), sometimes with a left-side head-serif and a tapered bottom. Medial *alif*'s shaft (green) consistently protrudes below the textline. The shaft's height fluctuates.

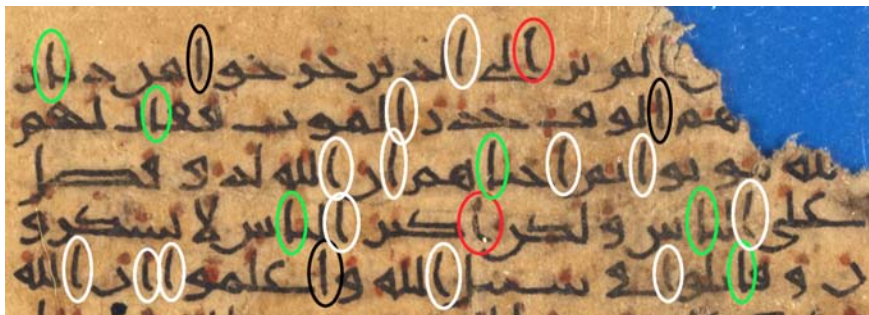


FIGURE 9 T-S Ar.40.177, F2, v.1–5

3.1.2.2 ‘Ayn/Ġayn

Initial ‘*ayn* has an extended, horizontal baseline with a curved vertical arm (red). Its medial form constitutes a closed, triangular shape, with a flat horizontal top.³² Two similarly sized semi-circular shapes comprise isolated ‘*ayn/ġayn* (green).

³¹ Khan proposes a possible tenth-century date for this fragment (1986:60, n. 34). However, it is worth noting its similarities to the twelfth-century text KfQ88.3 (see Déroche 1992:134, 181, 183).

³² The homographs medial ‘*ayn/ġayn* and medial *qāf/fā'* are differentiated from one another consistently in this text. The former has a triangular form, while the latter is diamond-shaped.



FIGURE 10
T-S Ar.40.177, F2, r.18

3.1.2.3 Kāf

An angular, 's'-shaped *kāf mabsūṭa* occurs in initial, medial (blue) and final (green) forms.



FIGURE 11
T-S Ar.40.177, F2, v.16

3.1.2.4 Mīm

In initial, medial and final forms, *mīm*'s head is angular, with a pointed top. The final form's tail extends from underneath the head, curving right, then left. The angular form and curved tail resemble NS.I and N.S.III, although the tail is situated more to the head's left than its centre. The softening of the angular shape in medial form resembles NS.III (Déroche 1992: 137).



FIGURE 12 T-S Ar.40.177, F2, v.17

3.1.2.5 Hā'

Akin to NS.III (Déroche 1992:136–137), an angular *waḡh al-hirr* represents *hā'* in initial (red) and medial (blue) forms.



FIGURE 13
T-S Ar.40.177, F2, v.10–11

3.1.2.6 Yā'

Yā' mardūda is more frequent than *yā' muḥaqqāqa* in final position. When space allows, *yā' mardūda*'s horizontal stroke is extended.

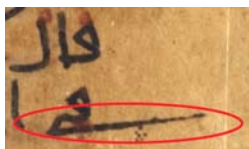


FIGURE 14
T-S Ar.40.177, F2, v.18–19

3.1.2.7 Lām-Alif Ligature

The triangular base and gentle leftward curve of *lām-alif warrāqīya* are consistently used.



FIGURE 15
T-S Ar.40.177, F2, v.14

3.2 Mağribī Scripts

3.2.1 T-S Ar.38.64

The main body of text is in *mağribī* (*mabsūt*) script, but gold *sūra* headings are in Early Abbasid script-style, thinly outlined with brown ink. The text follows a straight writing-line, with ascenders that lean leftwards, and descenders with deep, broad bowls. The lack of shading suggests that the scribe used a calamus with a rounded nib. Left-side head-serifs are not uncommon, and counters are generally closed.³³

3.2.1.1 Alif

Isolated *alif* has a long shaft and leans leftwards a little (red), sometimes with a slight left-turned foot. Final *alif* has a left-turned top hook, and the shaft occasionally juts below the textline (green). These two features typify NS.III's final *alif*.

33 The stylistic lengthening of the *basmala* occurs between the *ḥā'* and *mīm* of *al-rahmān*, rather than between the *sīn* and *mīm* of *bism*. This stylistic feature was favoured by *mağribī* scribes (Blair 2006:226).



FIGURE 16 T-S Ar.38.64,F1,r.1-2

3.2.1.2 'Ayn/Ġayn

Initial *'ayn/ġayn* has a large, curved head and horizontal baseline. Following the *mabsūṭ* style, the baseline does not extend far beyond the arm. The medial form is 'a [small] closed triangle resting on its tip' (Déroche 1992:136).



FIGURE 17 T-S Ar.38.64,F2,v.5-6

3.2.1.3 Kāf

Kāf mabsūṭa occurs in initial (red) and medial position. Final-form *kāf* (green) comprises a vertical stroke that is perpendicular to a shorter horizontal base stroke. The vertical stroke sometimes bends leftward. This style is known as *kāf mu'arrā* (Gacek 2012:319).

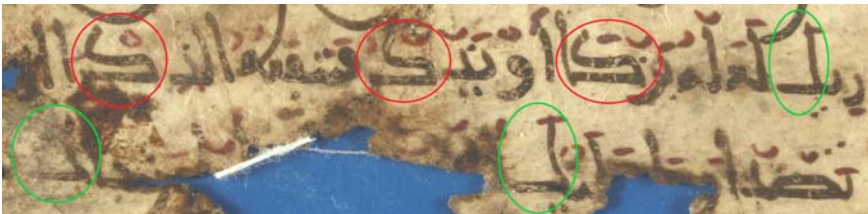


FIGURE 18 T-S Ar.38.64,F2,r.6-7

3.2.1.4 Mim

Initial *mīm* resembles a triangle with softened edges (red). Its horizontal base rests on the textline, connecting to the following letter from the bottom left-side. Final *mīm* is small with a closed counter, and sits below the textline. Its tail begins as a vertical stroke, before sweeping left in a large arc.



FIGURE 19 T-S Ar.38.64,F2,v.6–7

3.2.1.5 Hā'

Initial *hā'* (red) constitutes two small, oval-shaped loops, above and below the textline, with closed counters. This form is known as '*uḍn al-faras*' ('the horse's ear'). In medial form (green), a single stroke connects the loops, which do not meet in the middle.



FIGURE 20
T-S Ar.38.64,F1,r.3–4

3.2.1.6 Yā'

Isolated *yā'* extends in a sweeping curve below the following letters (fig. 21). In final form, *yā' mardūda* (fig. 22) is more common than *yā' muḥaqqqa*.

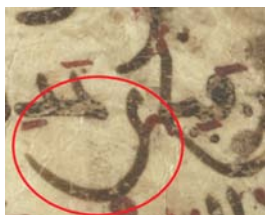


FIGURE 21
T-S Ar.38.64,F1,v.3



FIGURE 22
T-S Ar.38.64,F1,r.3

3.2.1.7 Lām-Alif Ligature

Two styles alternate. First, the two vertical strokes of *lām-alif warrāqīya* (fig. 23) form an elongated cross, with no baseline stroke. *Lām-alif muḥaqqqa*, a more curvilinear form with a looped bottom, also occurs (fig. 24).



FIGURE 23 T-S Ar.38.64,F2,r.4-5



FIGURE 24 T-S Ar.38.64,F1,r.3-4

3.3 Nashī Scripts

3.3.1 T-S Ar.38.39

While the style is predominantly curvilinear, rectilinear influence is also evident (e.g., *ṭā'*). The pen strokes' widths are uniform, suggesting a round-cut calamus was used. All the words rest on the straight, un-ruled writing-line. Ascenders only sometimes curve, while descenders are short and curve towards the left. Nearly all counters are open.

3.3.1.1 Alif

Isolated *alif* (red) alternates between a straight stroke with no adornment to a vertical stroke with a left-turned foot. Final *alif* is sometimes a straight stroke that leans rightwards (blue), but sometimes has a distinct curve, and left-turned head (green), akin to Abbasid bookhand (see fig. 1) and *maḡribī* script (see fig. 9).

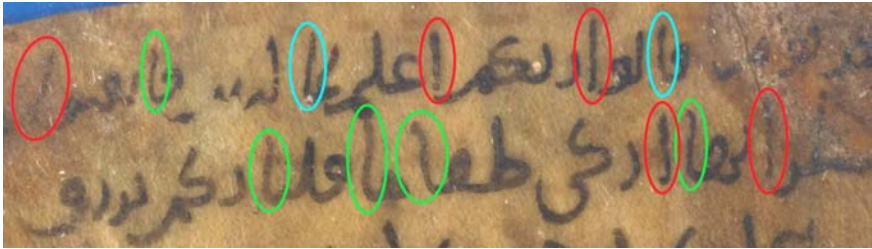


FIGURE 25 T-S Ar.38.39, F1, v.1-2

3.3.1.2 ‘Ayn/Ġayn

Initial *‘ayn/ġayn* varies somewhat in the point at which the base meets the arm, and in the inclination of the base relative to the textline (red), but these variations may be attributed to the inconsistencies of an untrained hand. Medial *‘ayn* (blue) is triangular and rests on its apex. It differs from medial *qāf* (green), where no central counter is visible, but this difference may be unintentional.

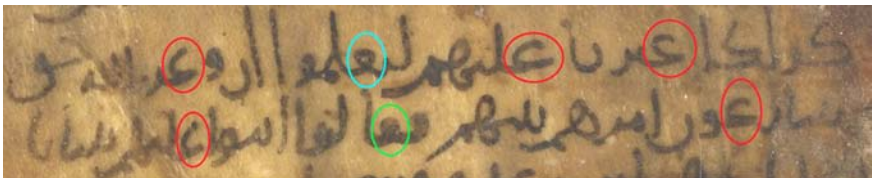


FIGURE 26 T-S Ar.38.39, F1, v.4-5

3.3.1.3 Kāf

Resembling NS.III, *kāf mabsūṭa* occurs in in all positions.



FIGURE 27
T-S Ar.38.39, F1, v.4



FIGURE 28
T-S Ar.38.39, F1, v.13

3.3.1.4 Mīm

The rounded stroke of initial *mīm* (red) extends at an approximate 45-degree angle before curving back to meet the baseline stroke. Initial *mīm* joins the following letter from the baseline, but medial *mīm*'s connecting stroke extends from its head (blue). In isolated (black) and final forms (green), *mīm*'s tail extends from the head, down and to the left (i.e. *mīm maqbūla maḥṭūfa*), possibly influenced by *muḥaqqaq* script. The tail varies in length, sometimes terminating in an upturned flick.

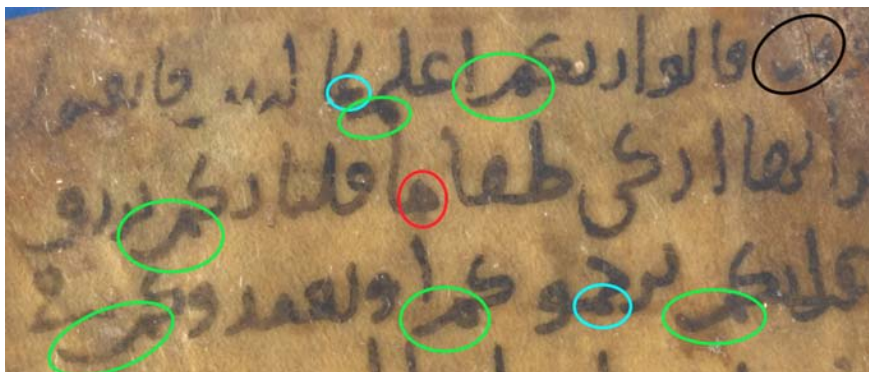


FIGURE 29 T-S Ar.38.39, F1, v.2–3

3.3.1.5 Hā'

As in T-S Ar.38.8, initial *hā'* occurs both as *waḡh al-hirr* (fig. 30); and as an initial stroke that remains open, with an internal loop that joins to the following grapheme (fig. 31). In medial form (blue, fig. 32), *'uḍn al-faras* is favoured. In word-final position, *hā' mardūfa* occurs (green, fig. 32).



FIGURE 30
T-S Ar.38.39, F1, r.1



FIGURE 31
T-S Ar.38.39, F2, v.9

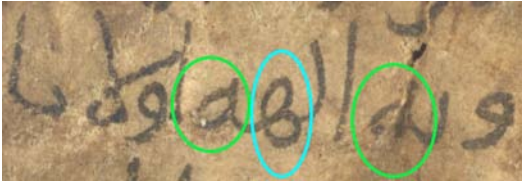


FIGURE 32
T-S Ar.38.39,F1,r.5

3.3.1.6 Yā’
Yā’ muḥaqqāqa (red) and *yā’ mardūda* (blue) appear interchangeably in word-final position, here.

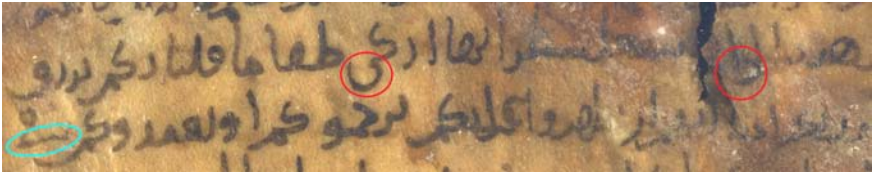


FIGURE 33 T-S Ar.38.39,F1,v.2–3

3.3.1.7 Lām-Alif *Ligature*
Three *lām-alif* ligatures appear: (i) *lām-alif warrāqīya* (blue); (ii) *lām-alif muḥaqqāqa* (red); and (iii) *alif muḥaffafa* (green). In the latter, the short, curved stroke of *alif* does not meet *lām*’s foot.



FIGURE 34 T-S Ar.38.39,F1,v.8–10

3.3.2 T-S Ar.40.97

Elements of *nashī* and *muḥaqqaq* scripts intermingle here, and the main hand is a little inconsistent.³⁴ The words sink onto the textline at a diagonal slant. Often, the final word of a line is superscript, resembling the Persian *nasta'liq* ('hanging') script, which may have its origins in *nashī* (Gacek 2008c:341; 2012:165). Shading occurs consistently, most notably in the curves of descenders, such as *nūn*. Some thinned-out angles suggest that the nib used was cut at an angle (Gacek 2012:41). Right-side head-serifs occur frequently. Counters are open.

3.3.2.1 Alif

Initial *alif* (red) sports a left-turned foot. The shaft often has a right-side head-serif. Isolated final *alif* (blue) constitutes a long stroke, leaning leftward at the top. Final *alif* (green) hooks left at the top, akin to T-S Ar.38.64 (see fig. 16).



FIGURE 35 T-S Ar.40.97, v.3

3.3.2.2 Kāf

Initial *kāf* alternates between *kāf-mabsūṭa* (blue, fig. 36) and *kāf maškūla* (red, fig. 36). *Kāf maškūla* does not always have a top arm. When it does, it floats above the grapheme's body. The two styles also alternate in medial form (fig. 37). An unmarked *kāf mu'arrā* occurs in both final (fig. 38) and isolated (fig. 39) positions.

34 The margin of this text contains a second hand, which is not discussed here.

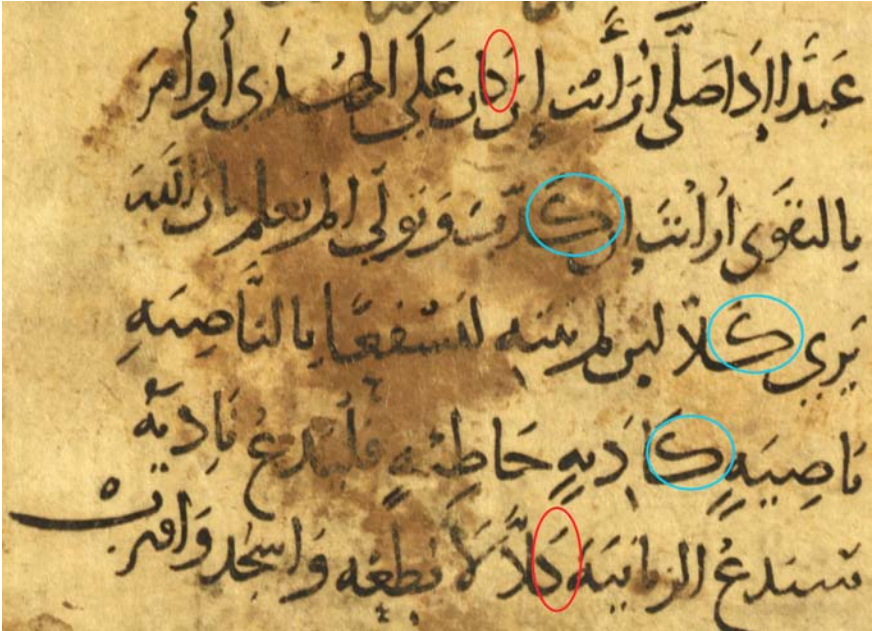


FIGURE 36 T-S Ar.40.97, r. 2-6

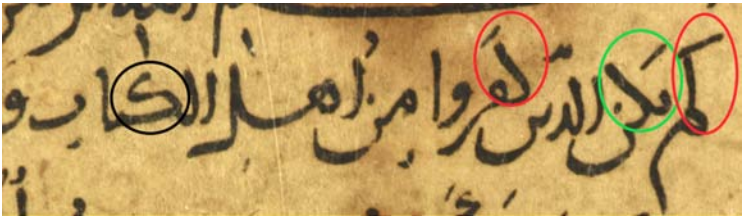


FIGURE 37 T-S Ar.40.97, v.3

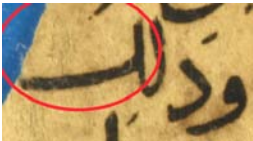


FIGURE 38
T-S Ar.40.97, v.8

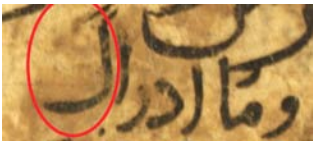


FIGURE 39
T-S Ar.40.97, r.9

3.3.2.3 Mīm

Initial *mīm* (green) is a misshapen circle, connected to the following letter from the top left-side. Medial *mīm* (blue) sits below the adjacent graphemes. Final *mīm* has two forms: *mīm maqlūba musbala*, with its long, vertical tail; and *mīm maqlūba maḥṭūfa*, which has a left-sloping, diagonal, tapered tail. It is not unusual for these two varieties to occur interchangeably (see James 1992:40–44).

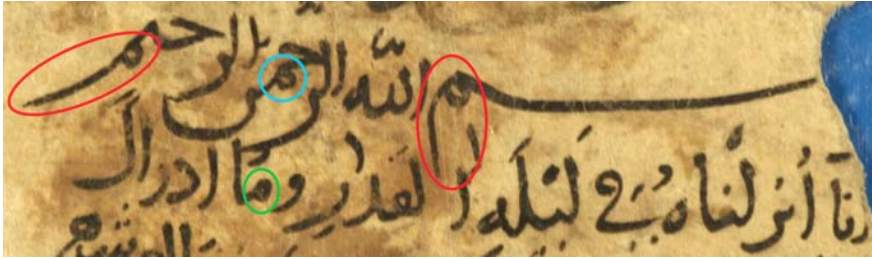


FIGURE 40 T-S Ar.40.97, r.8–9

3.3.2.4 Hā'

Initial *hā'* (red) constitutes a closed circle (*waḡh al-hirr*), sliced diagonally by the connecting stroke. *Waḡh al-hirr* (blue) and *uḍn al-faras* (green) occur interchangeably in medial position. In final form, *hā' mardūfa* appears (black). Isolated *hā'* resembles a tear-drop (purple).

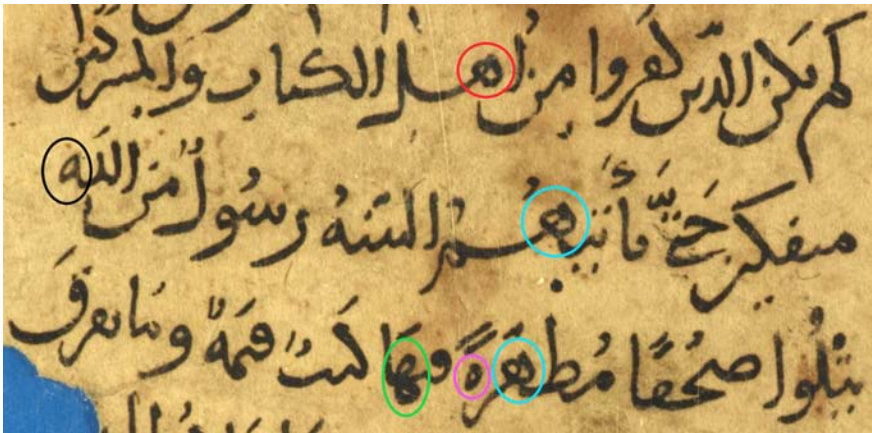


FIGURE 41 T-S Ar.40.97, v.3–4

3.3.2.5 Yā'

Final *yā'* is written as both *yā' mardūda* (fig. 42) and *yā' muḥaqqāqa*.

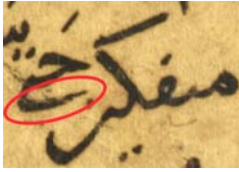


FIGURE 42
T-S Ar.40.97,v.4

3.3.2.6 Lām-Alif Ligature

In initial form, *lām-alif muḥaqqāqa* (red, fig. 43) and a rounded iteration of *lām-alif warrāqīya* (fig. 44) are favoured, while *lām-alif muḥaffafa* (blue, fig. 43) appears in word-final position.



FIGURE 43
T-S Ar.40.97,r.6



FIGURE 44
T-S Ar.40.97,v.6

3.3.3 T-S Ar.41.84

The hand here begins neatly at the top of both recto and verso, but grows increasingly untidy as it progresses. The words rest on a flat textline, but the space varies between the lines, which are not always straight. Ascenders tilt slightly to the left, while descenders are short and oblique (except final *nūn*). Aside from initial *alif*, there is little evidence of shading. The writing looks as if it might have been executed with a round-nib. Serifs are rare, and open counters are favoured.

3.3.3.1 Alif

Individual *alif* often has a left-turned, hooked foot, which varies in length (red), but it also appears as a hook-less stroke, which tapers towards the bottom (green). Final *alif* leans leftwards, and occasionally sports a head-serif. *Alif*'s height varies.



FIGURE 45 T-S Ar.41.84, v.2-4

3.3.3.2 Kāf

Kāf mabsūṭa appears in initial (red), medial (blue), final and isolated (green) forms. Its size varies, possibly dictated by the availability of space.

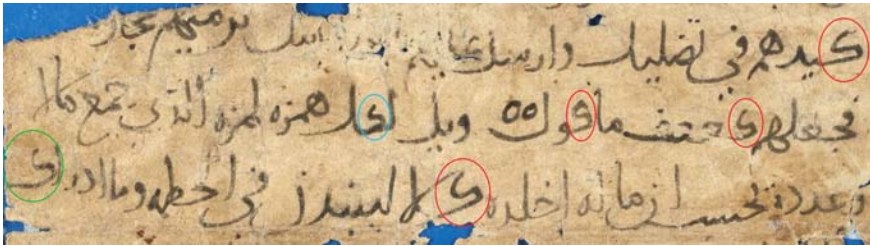


FIGURE 46 T-S Ar. 41.84, r.8-9

3.3.3.3 Mīm

Initial *mīm* (green) has an almond-shaped head, sometimes with an open counter. Medial *mīm* (blue) is no more than a dot in some instances. In others, it resembles the initial form, with an open counter. Connecting ligatures extend from the top of the letter's head. In some cases, final *mīm* has a long, vertical tail, (red) (i.e. *maqlūba musbala*), but in others, the tail is shortened (white). Occasionally, the tail projects diagonally down from the head and curves upwards, ending in a flick (black, i.e. *maqlūba muṣa'ara*).

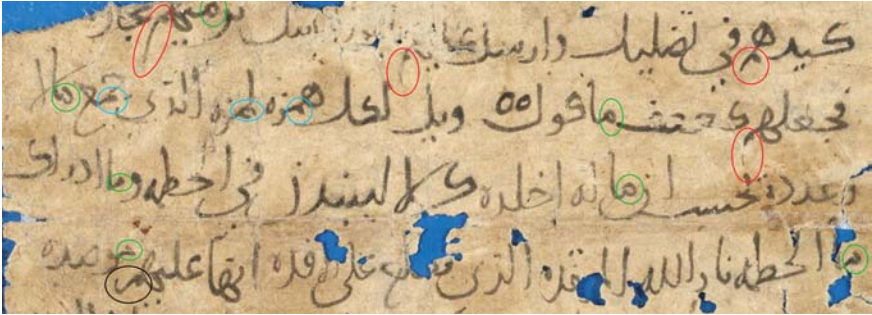


FIGURE 47 T-S Ar. 41.84,r.7–10

3.3.3.4 Hā'

Waḡh al-hirr appears exclusively in initial position (fig. 49), while *ʿuḡn al-faras* occurs in both initial (red, fig. 48) and medial positions (blue, fig. 48 and fig. 49).

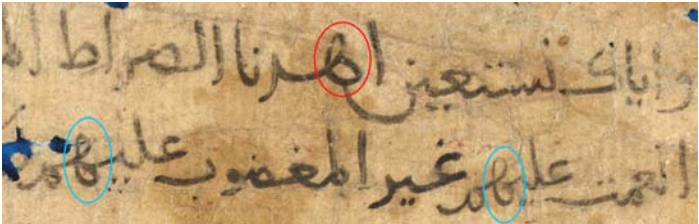


FIGURE 48 T-S Ar. 41.84,v.3–4

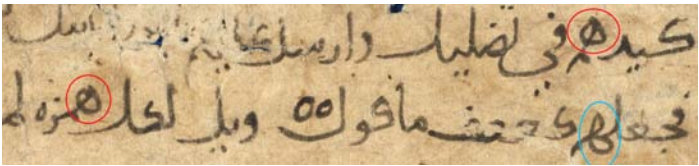


FIGURE 49 T-S Ar. 41.84,r.7–8

3.3.3.5 Yā'

Final *yā'* only appears as *yā' muḡaqqqa*.

3.3.3.6 Lām-Alif *Ligature*

Only *lām-alif muhaqqqa* occurs.

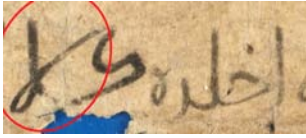


FIGURE 50
T-S Ar.41.84,r.9

3.3.4 T-S Ar.41.93

Written in a well-formed *nashī* script, the letters generally sit on a straight writing-line. Ascenders tilt to the left, sometimes with serifs, while most descenders (except final *mīm*) trail close to the textline in oblique curves. There is some shading, but the edges are fairly rounded. Both open and closed counters are found.

3.3.4.1 Alif

Initial *alif* (red) has a hint of a left-turned foot (i.e. *muḥarrafa*), although in some instances it may be more aptly described as a 'tapered terminal' (i.e. *muṭ-laqa*) (Gacek 2012:8). Final *alif* (blue) extends from the preceding letter in a smooth, upwards curve. Its shaft and tip bend slightly to the right. However, when topped with *hamza* (white), final *alif* is straight and leans a little leftwards.

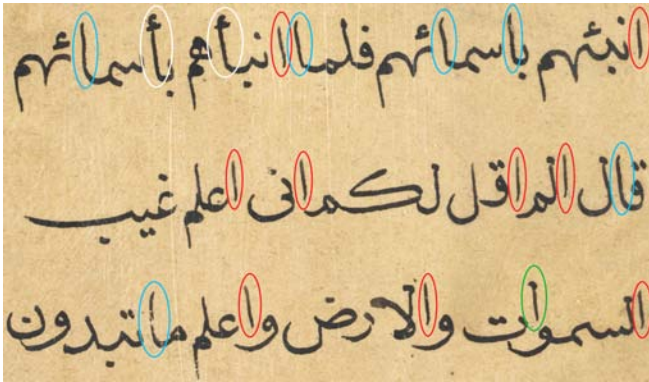


FIGURE 51
T-S Ar.41.93,v.4–6

3.3.4.2 Kāf

Kāf mabsūṭa (red, fig. 52) and *kāf maškūla* (white, fig. 52) interchange in initial and medial positions. The elongated 's'-shaped *kāf* sports a serif in initial and medial forms (red, fig. 52; blue, fig. 53). Final *kāf mu'arrā* (green, fig. 53) occurs consistently; a small *hamza* floating above its horizontal, curved foot.³⁵

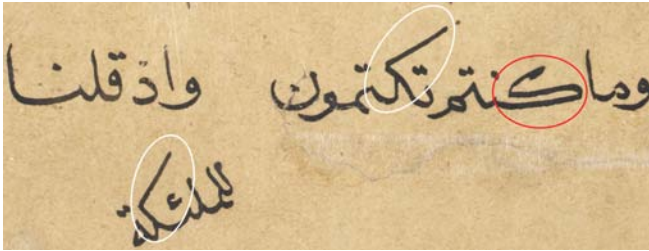


FIGURE 52
T-S Ar.41.93,v.7–8

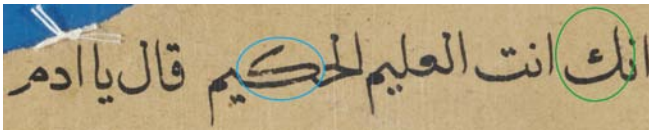


FIGURE 53
T-S Ar.41.93,v.3

3.3.4.3 Mīm

Medial *mīm*'s form depends on the preceding letter. When following a vertical letter (e.g. *lām*), *mīm* has an almond-shaped head, with an open counter; after a horizontal grapheme (e.g. *sīn*), it becomes a short, rectangular stroke, projecting below the textline. In final form, *mīm maqlūba musbala* (green, fig. 54) appears, with a rounded head and a straight, vertical tail, protruding from the head's left-side. Final *mīm maqlūba maḥṭūfa* (red, fig. 54) also occurs, its short, horizontal tail projecting from an open-counter head, flicking upwards at the end. This form appears on verso (fig. 55), but in the margin the word has been re-written (in the same hand) with *mīm maqlūba musbala*. This may suggest that the latter form was deemed preferable, at least in this context.

35 During the ninth century, a miniature s-shaped *kāf* was inserted above word-final *kāf* in order to differentiate it from final-form *lām* (Gruendler 2001:140), while the latter often received a supralinear 'v'-shape. These symbols were devised through the analogical extension of *ihmāl* signs, used to ensure correct reading of unpointed letters, to these two final-form graphemes (Witkam 2015:403–404).

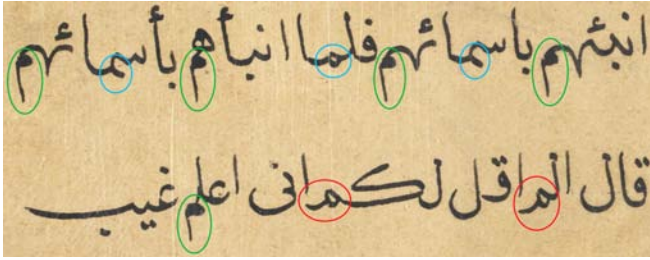


FIGURE 54
T-S Ar.41.93,v.4-5

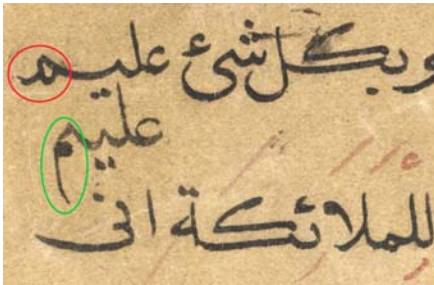


FIGURE 55
T-S Ar.41.93,r.3-4 + marginalia

3.3.4.4 Hā'

In initial position (red, fig. 56), the preferred form is a raised *waḡh al-hirr*, with its central stroke extending down towards the textline. Medial form occurs as *ʿudn al-faras* (white, fig. 57) and as a simple 'v'-shape, which sits below the textline (blue, fig. 56).

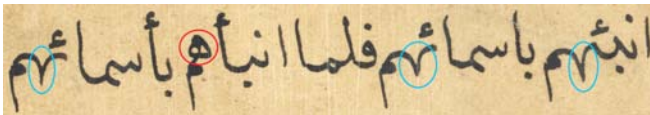


FIGURE 56
T-S Ar.41.93,v.4

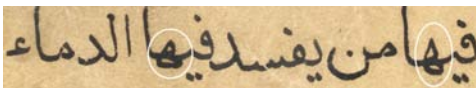


FIGURE 57
T-S Ar.41.93,r.6

3.3.4.5 Yā'

Both *yā' muḥaqqqa* (red) and *yā' mardūda* (green) appear.

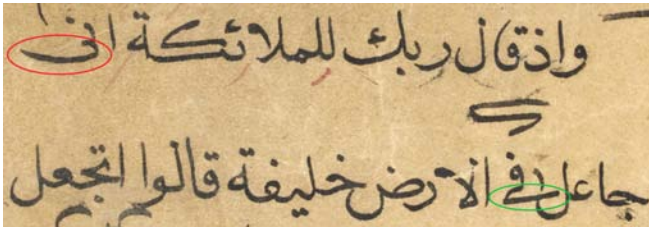


FIGURE 58
T-S Ar.41.93,r.4–5

3.3.4.6 Lām-Alif Ligature

Only *Lām-alif warrāqīya* occurs. Its base rests on the textline at a slight angle. Both arms sport a head-serif.

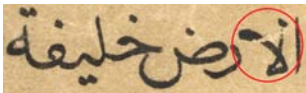


FIGURE 59
T-S Ar.41.93,r.5

3.3.5 T-S Ar.42.145

These bifolia appear to contain two different hands. The scribe began with Qur'ān 36:1–11 (F1 recto) and moved on to verse 36:11–18 (F1 verso) (hand one). These two sections are written in a neat, precise hand. The following verses 36:18–27 (F2 recto) and 37:12–26 (F2 verso) become progressively larger and untidier. The remaining verses (Qur'ān 37:27–65 and 37:120–137) continue in this style (hand two), perhaps written in haste, as a draft or writing practice.

The words rest on a straight writing-line, leaning slightly leftwards. Although not as accentuated as *nasta'liq* script, there is a tendency for initial letters to be superscripted, with the remaining letters falling onto the textline. Ascenders vary in height, as do the curved descenders. Head-serifs appear rarely. Shading is apparent in the writing on F1 recto, F1 verso and the beginning of F2 recto, but thereafter it ceases. The lack of shading in some folios may be due in part to a change from an obliquely cut reed to a rounded nib.

3.3.5.1 Alif

Isolated *alif* has four variations (fig. 60). First (red), the vertical stroke leans slightly rightward, tapers at the top, and has a slight left-turned foot. Second (white), the vertical stroke has a right-turned curve in the middle, and its thickness decreases from top to bottom. The third manifestation (yellow) is also hinted at in F4 verso, but the shading apparent in this example is not found

there. Fourth (black), the shaft curves leftwards in the middle, and has a right-side head-serif. Final *alif* has two forms. The first (blue) has a minor rightward bend, and the top tends slightly leftwards. The shaft's head is sometimes tapered or diamond-shaped. Second (green), the curvilinear *alif* bends towards the right at the top, which sometimes tapers or sports a left-side head-serif.



FIGURE 60 T-S Ar.42.145, F1, v.2–4 and F3, r.2–4

3.3.5.2 ‘Ayn/Gayn

Medial ‘*ayn* (blue, fig. 62) sports closed counters (hand one), but *gayn* (blue, fig. 61) has an open counter (hand two). This difference between the first (F1 recto and F4 verso) and second (all other folios) hands is maintained throughout the text.

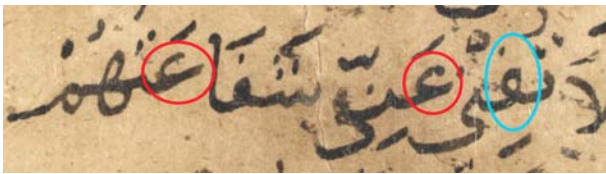


FIGURE 61
T-S Ar.42.145, F2, r.8

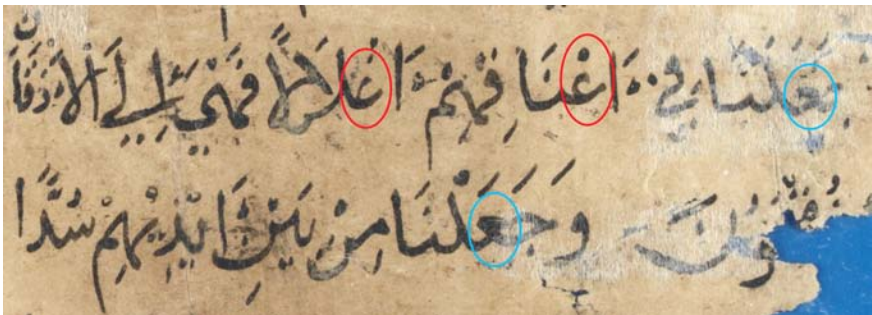


FIGURE 62 T-S Ar.42.145, F1, r.6–7

3.3.5.3 Kāf

Kāf mabsūta and *kāf maškūla* alternate throughout. Initial *kāf maškūla* (black, fig. 63) is found alongside initial *kāf mabsūta* (red, fig. 63). Both styles occur in medial form (fig. 64). In hand one, *kāf mu‘arrā* appears in word-final position, with a miniature ‘s’-shaped *kāf* floating above its baseline (fig. 65).

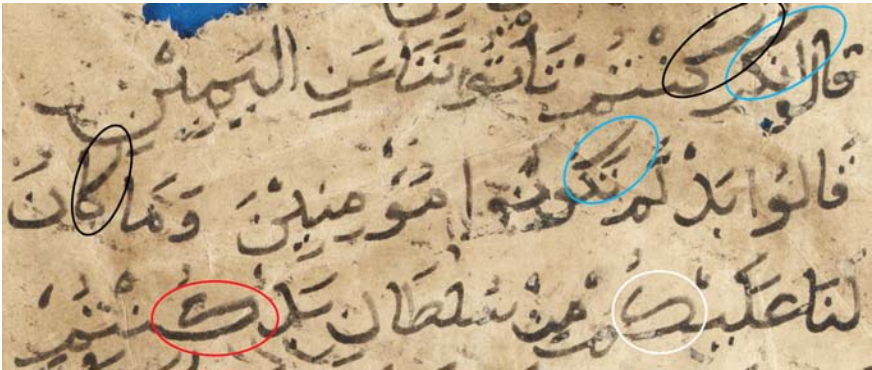


FIGURE 63 T-S Ar.42.145, F3, r.2-4

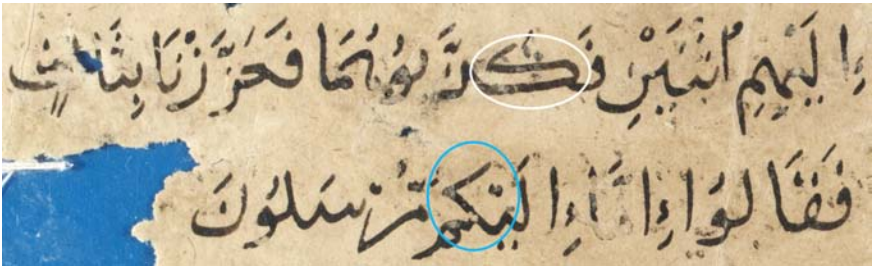


FIGURE 64 T-S Ar.42.145, F1, v.6-7

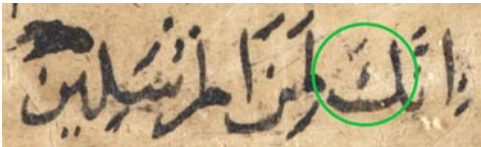


FIGURE 65
T-S Ar.42.145, F1, r.2

3.3.5.4 Mīm

On F1 recto, final *mīm* with a long, vertical tail (i.e. *maqlūba musbala*) is favoured (green, fig. 66). In the remaining folios (ff. 2-4), *mīm maqlūba maḥṭūfa* occurs more frequently (white, fig. 67; fig. 68). The former has closed counters throughout, while the latter has open counters. Initial (red) and medial (blue) forms have closed counters in the neater hand (fig. 66; fig. 67), but open counters in the second hand (fig. 68).

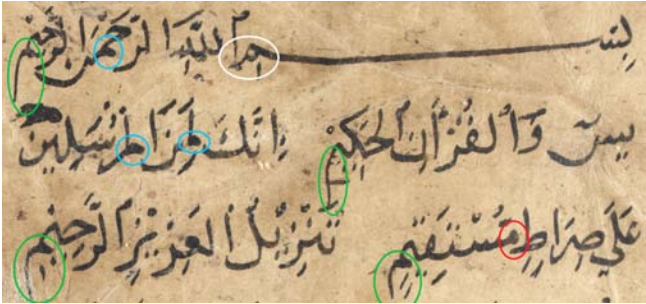


FIGURE 66
T-S Ar.42.145, F1,r.1–3

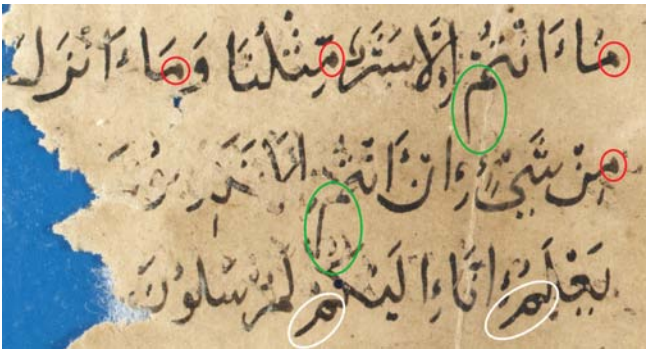


FIGURE 67
T-S Ar.42.145, F1,v.8–9

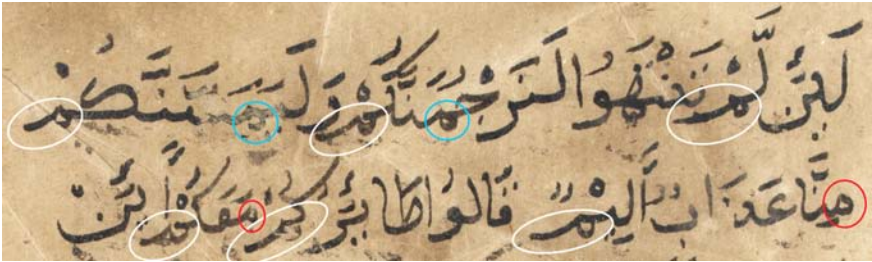


FIGURE 68 T-S Ar.42.145, F2,r.1–2

3.3.5.5 Hā'

Both hands generally³⁶ use *waḡh al-hirr* (red, fig. 69; fig. 70). Medial *ʿuḍn al-faras* with open counters occurs in both hands, but the first hand often favours *hā' mu'allaqa* (white, fig. 69), while the second uses *ʿuḍn al-faras* without exception (fig. 70).

³⁶ F1 r.5 (red): alternative initial position *hā'*.

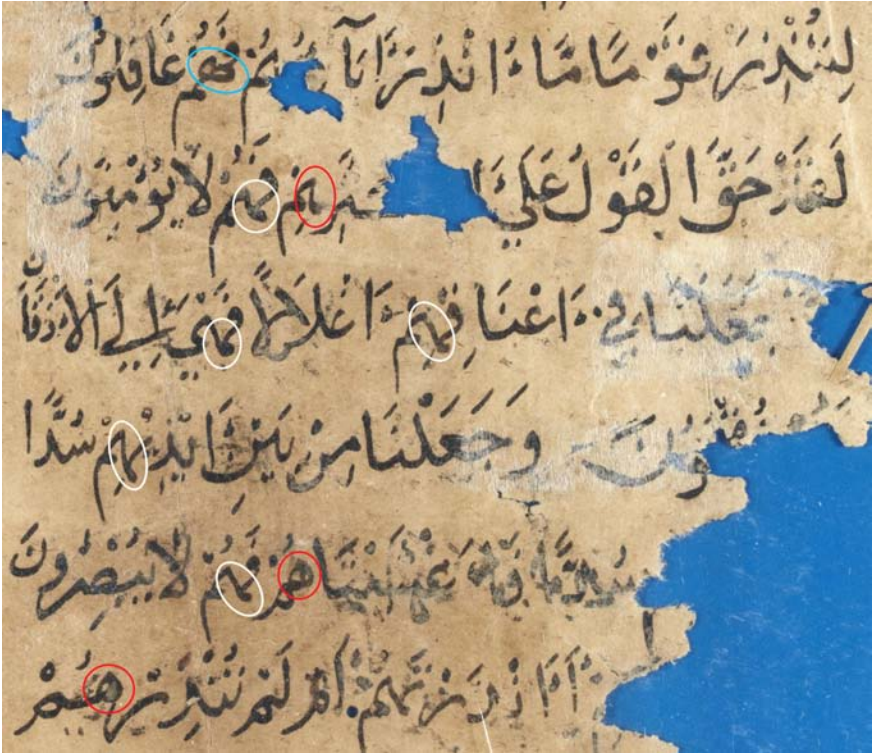


FIGURE 69 T-S Ar.42.145,F1,r.4-9

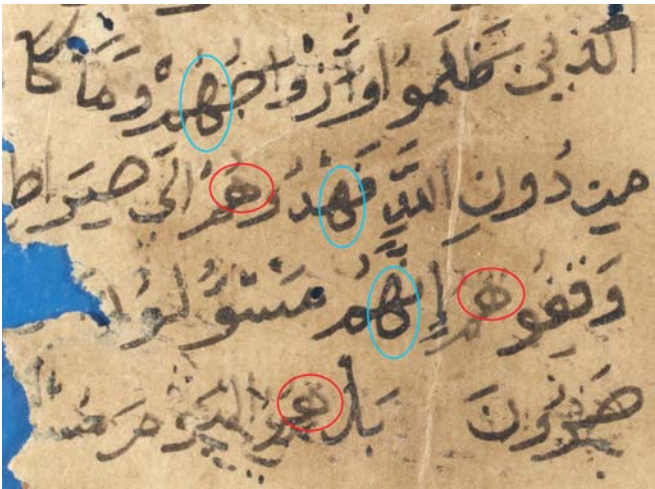


FIGURE 70 T-S Ar.42.145,F2,v.8-11

3.3.5.6 Yā'

Yā' mardūda only occurs in the first hand. Otherwise, *yā' muḥaqqqa* dominates.

3.3.5.7 Lām-Alif Ligature

All three *lām-alif* ligature varieties are used by both hands. In isolation, *lām-alif muḥaqqqa* (red, fig. 71) and *lām-alif warrāqīya* occur (blue, fig. 72; fig. 73), but in final position, *lām-alif muḥaffafa* is preferred (green, fig. 71; fig. 72; fig. 74).

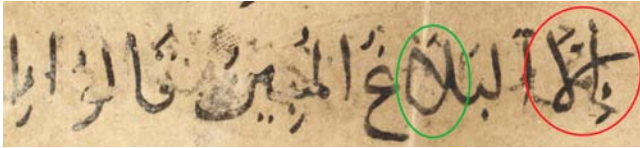


FIGURE 71
T-S Ar.42.145, F4, v.11

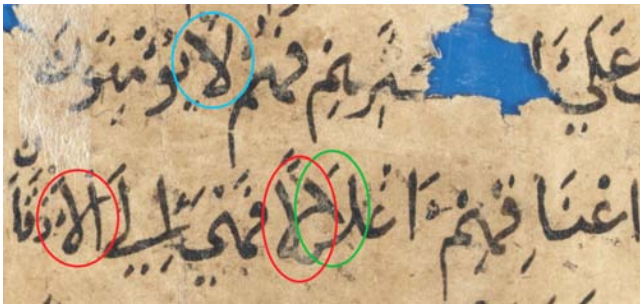


FIGURE 72
T-S Ar.42.145, F1, r.5–6



FIGURE 73 T-S Ar.42.145, F2, r.5

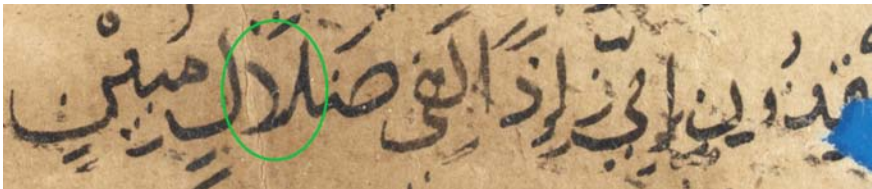


FIGURE 74 T-S Ar.42.145, F2, r.9

3.3.6 T-S Ar.42.193

This script-style is more rectilinear than other fragments in this category. The hand is reasonably neat, with tall, upright ascenders and a straight writing-line. The textlines are so close together that ascenders and descenders often contact words in adjacent lines. The script is serif-less. Shading does occur, but is not systematic, and seems to result from varying quantities of ink on the pen-nib. The heads of *fāʾ*, *qāf*, *mīm* and *wāw* rarely have open counters.

3.3.6.1 Alif

Isolated *alif* is a straight shaft (white, fig. 75), but sometimes has a left-turned foot (red, fig. 75). In some instances, the foot is more pronounced (fig. 76), and the tip of the shaft bends rightward. Final *alif* (blue, fig. 75) occasionally projects below the textline (green, fig. 75). *Alif*'s width and height vary due to the amount of ink on the pen-nib.

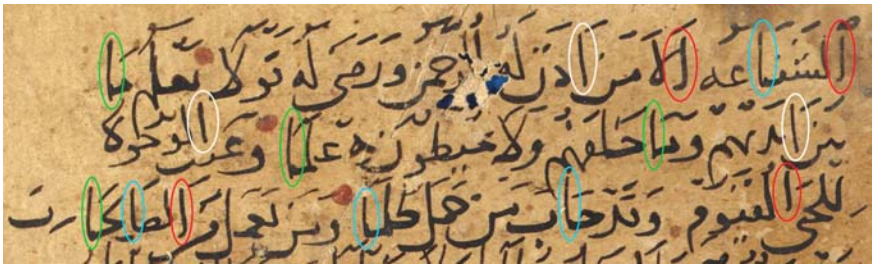
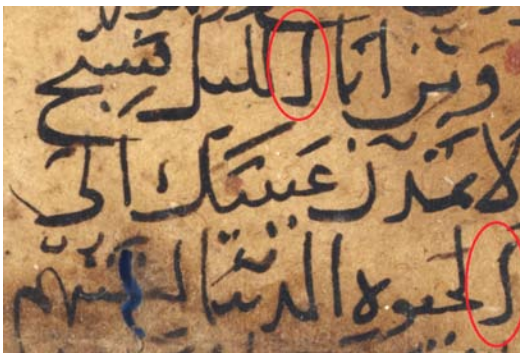


FIGURE 75 T-S Ar. 42.193, F1, r1-3

FIGURE 76
T-S Ar. 42.193, F1, v7-9

3.3.6.2 Kāf

Only *kāf maškūla* occurs in medial position (blue, fig. 77), but in initial position (white, fig. 77) it interchanges with *kāf mabsūṭa* (red, fig. 77). With one exception (fig. 79), final form is *kāf mu'arrā* with a thin vertical stroke and

thicker curved base (fig. 78). A miniature *kāf* floats above the baseline. Sometimes (fig. 79), another stroke stretches from the top of the grapheme back over the preceding letters.



FIGURE 77 T-S Ar.42.193,F2,v.5–6

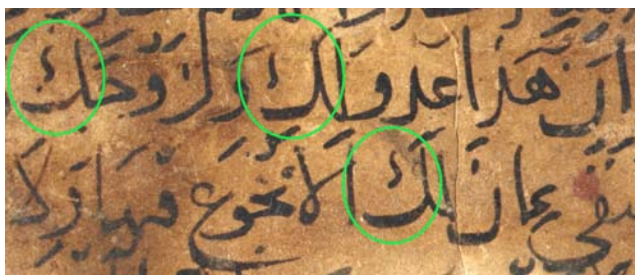


FIGURE 78
T-S Ar.42.193,F1,r.10–11

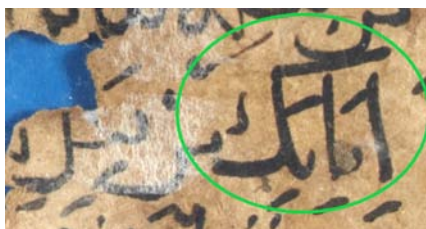


FIGURE 79
T-S Ar.42.193,F1,v.15

3.3.6.3 Mīm

Initial *mīm* (red, fig. 80) constitutes a short stroke, resting on the textline. Sometimes, the head floats above the textline and the connecting stroke slants downward. Medial *mīm* sits below the textline, sometimes resembling a 'v' (blue, fig. 80). The most common final form is *maqlūba musbala* (green, fig. 80). Occasionally, the tail extends towards the left, as in *maqluba maḥṭūfa*, with an open counter (fig. 81). Isolated *mīm* (white, fig. 80) has a more curved tail, which extends downwards from the right-side of the grapheme's head.



FIGURE 80 T-S Ar.42.193, F1, v.2–5

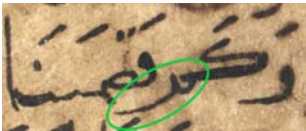


FIGURE 81
T-S Ar.42.193, F2, r.11

3.3.6.4 Hā'

Initial *hā'* takes the *waḡh al-hirr* form (red, fig. 82). Medial *hā'* (blue, fig. 82) is either a 'v' below the baseline (i.e. *hā' mu'allaqa*) or *uḍn al-faras* with closed counters (fig. 83). In the former case, the preceding grapheme is horizontal, while in the latter, it is vertical. Final *hā'* (green) may have an open counter and a short, vertical shaft that projects up from the grapheme's head (fig. 82), or a vertical stroke that projects diagonally towards the baseline (fig. 84).

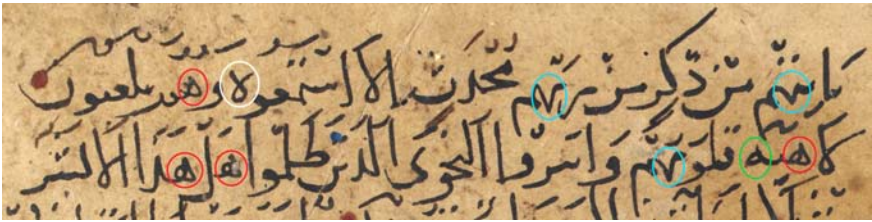


FIGURE 82 T-S Ar. 42.193, F2, r.1–2

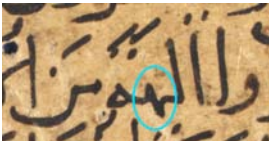


FIGURE 83
T-S Ar. 42.193, F2, v.2

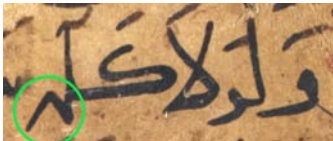


FIGURE 84
T-S Ar. 42.193, F1, v.5

3.3.6.5 Yā'

Only *yā'* *muḥaqqqa* appears for final-form *yā'*.

3.3.6.6 Lām-Alif Ligature

Lām-alif warrāqīya (red, fig. 85) and *lām-alif muḥaqqqa* (blue, fig. 85) both occur. *Lām-alif muḥaffafa* (green, fig. 86) appears in word-final position.

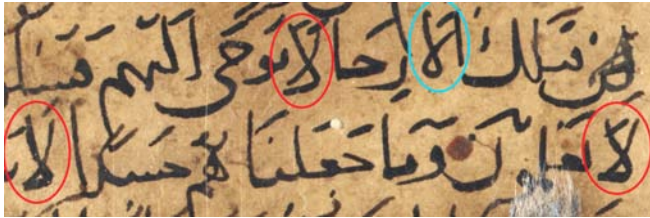


FIGURE 85
T-S Ar.42.193, F2,r.7–
8

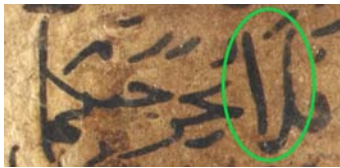


FIGURE 86
T-S Ar.42.193, F1,r.10

3.4 *Muḥaqqaq* and *Tulūṭ* Scripts

3.4.1 T-S Ar.41.119

This hand is elegant and regular. The letters sit on a straight writing-line, though those with tails tend to sit a little higher, and descenders hang at an approximate 135-degree (anti-clockwise). The length of ascenders and descenders is notably uniform, and the writing tilts slightly to the left. Letters consistently taper at angles and at the end of vertical and oblique strokes. Tear-drop head-serifs adorn the top right-side of many vertical shafts (see Atanasiu 2003: fig. 8–3 in Gacek 2012:123). Counters are open throughout.

3.4.1.1 Alif

Isolated *alif* (red) has a long, left-slanting shaft. Its width decreases from top to bottom, resulting in a fine tip (i.e. *alif muṭlaqa*). A tear-drop head-serif caps the right side. In two instances (green), isolated *alif* has a left-curved downward foot (i.e. *alif muḥarrafa*). Final *alif* curves slightly rightward in the centre and leftward at the top, though the depth of these curves varies.



FIGURE 87 T-S Ar.41.119, v.1-2

3.4.1.2 Kāf

A uniform *kāf mabsūṭa* (red, fig. 88) occurs in every initial position. Medial-form *kāf* (blue, fig. 89) alternates between *kāf mabsūṭa* and *kāf maškūla*. Isolated and final *kāf* (green, fig. 88) resemble *kāf mu'arrā* in their straight, vertical shaft and long, curved foot, but they also have a detached diagonal stroke above the shaft (as seen in T-S Ar.42.193, fig. 78). A miniature 's'-shaped *kāf* floats above final *kāf* (fig. 88) and occasionally above medial *kāf* (fig. 89).

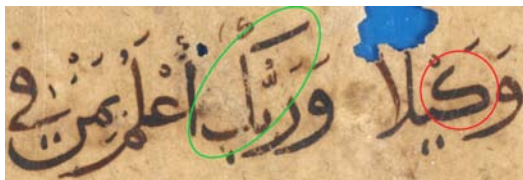
FIGURE 88
T-S Ar.41.119, v.4

FIGURE 89 T-S Ar.41.119, v.2-3

3.4.1.3 Mīm

Initial *mīm* has an almond-shaped, open-counter head, and floats above the textline (red). The connecting ligature descends diagonally from the pointed

apex. Medial form (blue) has a closed counter and juts below adjacent graphemes. Final *mīm*'s head (green) hangs under the textline, below the preceding ligature. Its tail descends at an approximate 135-degree angle, bending slightly before terminating in a thin wedge. This *mīm* is characteristic of *muḥaqqaq* scripts.

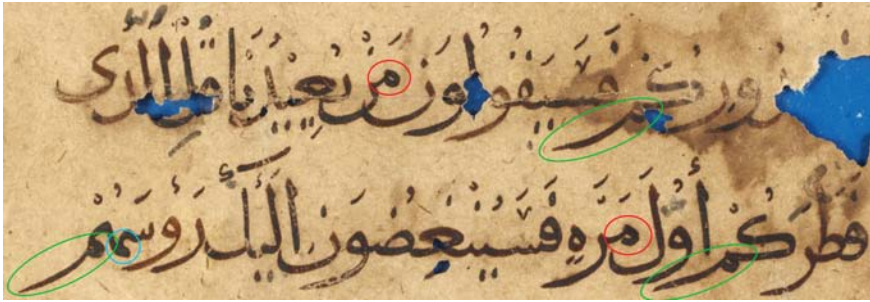


FIGURE 90 T-S Ar.41.119, r.5–6

3.4.1.4 Hā'

Initial *hā'* (fig. 91) resembles *wağh al-hirr*, but its outer stroke is separate and towers over the inner loop. *Wağh al-hirr* (fig. 92) and *ʿuḍn al-faras* (fig. 93) occur for medial form. The final form (fig. 94) is *hā' mardūfa/marbūṭa*, with a vertical ear and a downward-pointing looped head.

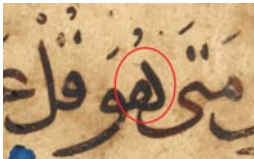


FIGURE 91
T-S Ar.41.119, r.7

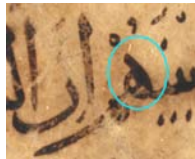


FIGURE 92
T-S Ar.41.119, v.1

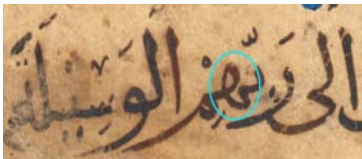


FIGURE 93
T-S Ar.41.119, v.9

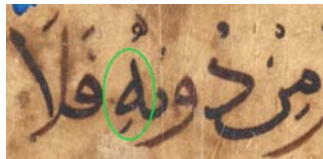


FIGURE 94
T-S Ar.41.119, v.6

3.4.1.5 Yā'

Both *yā' muḥaqqqa* (fig. 95) and *yā' mardūda* (fig. 96) occur.

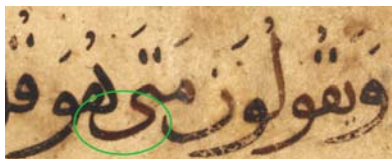


FIGURE 95
T-S Ar.41.119,r.7

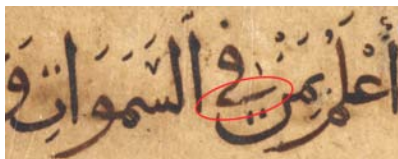


FIGURE 96
T-S Ar.41.119,v.4

3.4.1.6 Lām-Alif Ligature

Lām-alif muḥaqqqa (red) occurs in isolation, and the right shaft has a head-serif. *Lām-alif muḥaffafa* appears in word-final position, varying slightly depending on its function. When the final letter is *tanwīn alif*, the serif-less shaft curves as it descends towards the *lām* (green). By contrast, regular final *alif* is straight, with a right head-serif (blue).

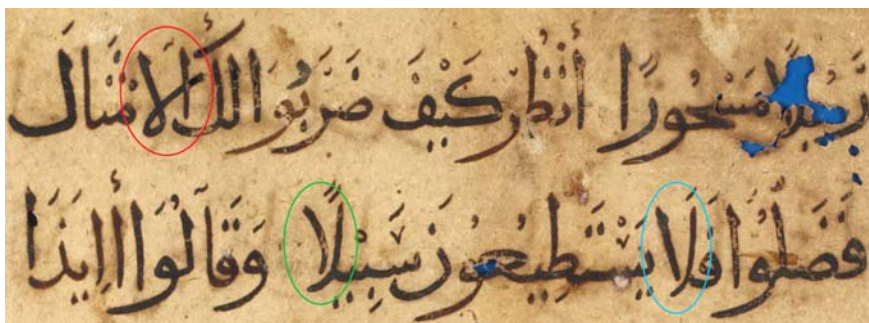


FIGURE 97 T-S Ar.41.119,r.1–2

3.4.2 T-S Ar.19.7

This small fragment contains all the hallmarks of a large, stylised *tuluṭ* script: curved descenders with hairlines which reach up towards the following letter; long vertical ascenders, leaning slightly to the left; and large open counters.

3.4.2.1 Alif

Two instances of isolated *alif* (red, fig. 98) have a long, left-leaning shaft, measuring 6.7 cm. The shaft of the first *alif* tapers towards the bottom, ending in a hairline foot that curves below the following *lām*. A horizontal bar joins the isolated *alif* to a preceding final *alif* (fig. 99). Another isolated *alif* (fig. 98) sports a beak-like, right-side head-serif.

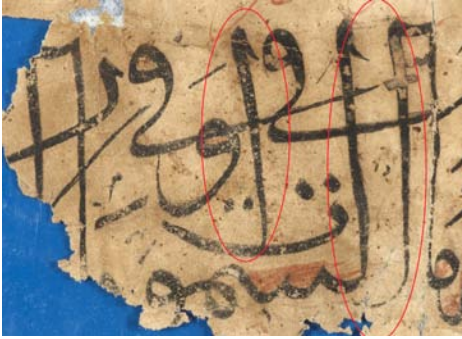


FIGURE 98
T-S Ar.19.7,v.1–2

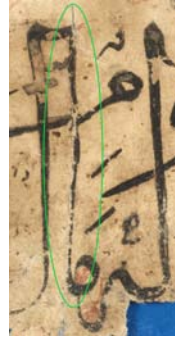


FIGURE 99
T-S Ar.19.7,v.1–2

3.4.2.2 Mīm

Initial (red) *mīm* is circular with an open counter, and joins the following grapheme with a stroke from beneath its head. The medial form (blue) also has an open counter, but hangs below the textline, underneath the adjacent ligatures. Final *mīm* may be a closed-counter head below the ligature of the preceding grapheme (green), its tail descending diagonally, before curving up in a hairline flick (i.e. *maqlūba muša'ara*); or a closed-counter head with a curved, vertical tail (white) (i.e. *maqlūba musbala*).

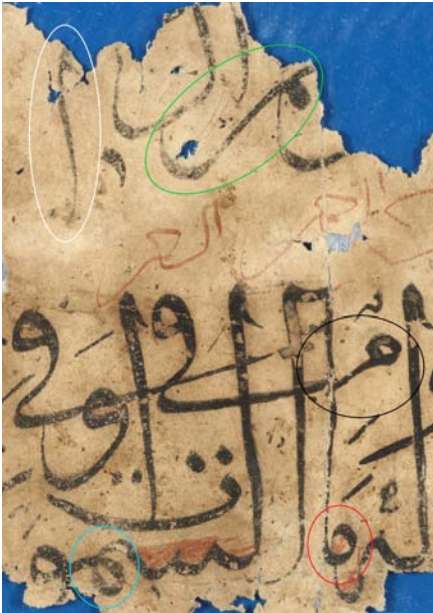


FIGURE 100
T-S Ar.19.7

3.4.2.3 Hā'

Final *hā'* follows the *hā' muḥdawdiba* style (green). The looped body and short angled arms of *hā' murabba'a* (red) occur in isolation. Its right arm is considerably broader than the left.

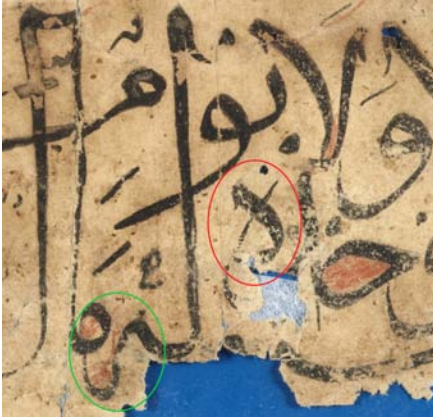


FIGURE 101
T-S Ar.19.7

3.4.2.4 Yā'

Yā' mardūda appears twice. Its tail terminates in a hairline.

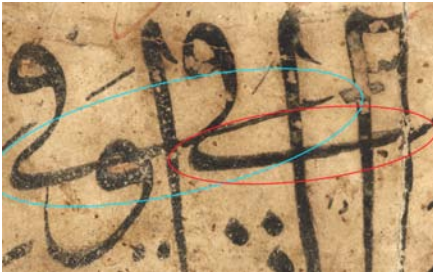


FIGURE 102
T-S Ar.19.7

3.4.2.5 Lām-Alif Ligature

Lām-alif muḥaqqaqa (red) and *lām-alif muḥaffafa* (blue) both occur. In the former, the left arm is longer and wider and has a left-side head-serif, while the right arm ends in a hairline. In the latter, the *lām* and *alif* each have a head-serif, on their right and left sides, respectively.

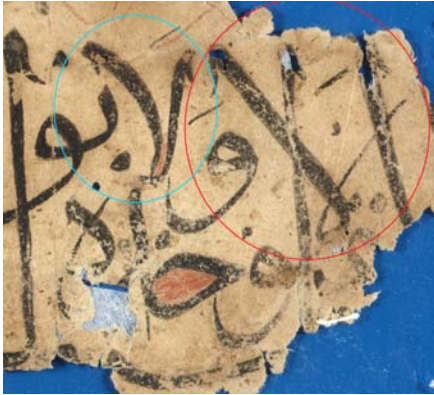


FIGURE 103
T-S Ar.19.7

4 Vocalisation

Ten of the T-S Ar. Qur'ān fragments have some form of vocalisation marking. They show few variations from typical Qur'ānic vocalisation systems, and fit broadly into four types. First, the single unvocalised fragment (T-S Ar.38.39). Second, two fragments use the red 'rubricated' dot system (T-S Ar.38.8, T-S Ar.40.177). Third, seven manuscripts all contain forms of the 'modern' Arabic vocalisation signs (T-S Ar.19.7, T-S Ar.40.97, T-S Ar.41.84, T-S Ar.41.93, T-S Ar.41.119, T-S Ar.42.145, T-S Ar.42.193), although there is substantial variation within this group. Finally, T-S Ar.36.64 has a distinct '*maḡribī*' type of vowel pointing.

Besides the vocalisation signs, there is a tendency among all eleven fragments³⁷ to indicate long medial /ā/ with *plene alif*, although with varying degrees of frequency. This feature distinguishes them from 'model' Qur'āns, where medial /ā/ was more often written defectively (see Khan 1990–1991:57–58). Moreover, most of the fragments consistently lack *alif ḥanjariyya* ('dagger alif'), even in places where it appears in the standard Qur'ānic text. Some—most notably T-S Ar.38.64—also substitute *alif ṭawīla* in place of *alif maqsūra*, possibly to ensure correct pronunciation during private study.

³⁷ With the possible exception of T-S Ar.19.7.

4.1 *Unvocalised*

4.1.1 T-S Ar.38.39

This fragment lacks vocalisation signs of any kind, although the absence of vocalisation and diacritical dots does not necessarily indicate that it is especially old.

4.2 *Red Dots*

The red-dot system was the first vocalisation system developed to record Arabic vowels, most likely in Iraq or Syria around 700 (Abbott 1939:39; George 2015a:4–7). Simply put, a red dot above a consonant indicates the vowel /a/, a dot below indicates /i/, and a dot to the left indicates /u/. Two dots mark *tanwīn* (nunation). This basic system saw widespread use in Qurʾāns across the Middle East and North Africa, and remained common even after the invention of other vowel-pointing techniques in the eighth and ninth centuries (Abbott 1972:3, 9). Substantial modifications to the red-dot system also occurred during this period, including the introduction of additional coloured dots for diacritical features like *hamza* (glottal stop), *sukūn* (silence), and *tašdīd* (gemination).

Yasin Dutton has explored this evolution in depth, showing that despite the growing complexity of the system, individual Qurʾān manuscripts are internally consistent, and some even use multiple colours of dots to record variant readings (1999, 2000). Building on Dutton's work, Alain George argues that it is possible to use the work of the Andalusian traditionist Abū ʿAmr al-Dānī (d. 1053), specifically his *al-Muḥkam fī naḡ al-maṣāḥif* (*Rules for Pointing the Codices*) (al-Dānī 1960), to determine the provenance of manuscripts with different variations of the red-dot system (George 2015a, 2015b). The analyses of the manuscripts in this group are based on George's compilation of the calligraphic rules in al-Dānī's text (George 2015a:15).

4.2.1 T-S Ar.38.8

This fragment is partially vocalised, following the standard red-dot arrangement for marking /a/ (supralinear), /i/ (sublinear), and /u/ (intralinear), as well as *tanwīn*. In addition to red vowel dots, the manuscript originally had darker dots of a second colour, probably green, for marking other diacritical phenomena. However, the leaf has significant water damage, which has caused some red dots to turn black, and many other dots to fade or blur. It is often difficult to determine their original colours, but some conclusions are possible. A single red or dark-coloured dot can represent *madd* (lengthening) (r.1, r.3; v.2, v.5) or the *sukūn* on a *mater lectionis* of a long vowel (r.1, r.3, r.4, r.7; v.2, v.6, v.8). These dots can be above (r.1; v.8), below (r.1, r.4), or to the left (v.5,

v.6) of a letter, seemingly interchangeably. A single red dot can also represent *sukūn* on other consonants (r.1, r.7), and a red dot or a dark dot can mark *šadda* (r.7; v.2, v.3). These inconsistencies suggest that the manuscript was pointed twice.

In r.2, the red dot below *allāh* in *min 'amri llāhi* (Qur'ān 11:43) is relatively far to the right, between the *hā'* and *lām*, and an additional red dot sits above the *hā'*. This placement may indicate a blending of the /ā/ and /i/ vowels (*min 'amri llēhi*) as an instance of *'imāla*, conditioned by the preceding I-vowel in *'amri*.

The use of red dots for *sukūn* suggests that the red layer of the vocalisation follows a Medinan or early *magribī* style. That said, the original colours are unclear, and the text lacks other distinctive Medinan or *magribī* features (George 2015a:15).

4.2.2 T-S Ar.40.177

This manuscript follows the basic red-dot system, with some slight variations. *Tanwīn fath* and *kasr* appear as horizontal pairs of dots, while vertical dots mark *tanwīn ḍamm*. *Alif* with a red dot represents a vocalised *hamza*, and a red dagger *alif* appears once on *allāh* (F2 v.5). A horizontal black (F1 v.14) or yellow (F2 r.6) stroke above a letter indicates *sukūn*. This yellow stroke accompanies a large dark dot, which also indicates *sukūn* once elsewhere (F2 v.6). A relatively small red dot appears below the *ḍād* in *faḍlīn* (Qur'ān 2:243, F2 v.3), which may represent *sukūn* or a variant reading with *faḍilīn*.

The large *hā'* in the margin of F2 r.17 overlaps the *tanwīn ḍamm* at the end of verse 2:240, suggesting that the vowel dots were added to the manuscript before the fifth-verse marker, likely only a short time after the consonantal text was produced.

4.3 'Modern' Vocalisation

The standard 'modern' Arabic vocalisation signs developed by the mid-ninth century (Abbott 1972:9–11; Déroche 2003; George 2015a:13–14), and saw use in Qur'anic texts by the eleventh century at the latest (Déroche 2003). Al-Dānī refers to these signs as *šakl al-šīr* ('the marking of poetry') (al-Dānī 1960:4a, 11a), which he says consisted of miniature forms of *alif* (/a/), *yā'* (/i/), and *wāw* (/u/) in the same positions as the older red dots. The general consensus in both the Arabic tradition and secondary scholarship is that the grammarian al-Ḥalīl b. Aḥmad (d. 786/791) invented this system for his work on prosody, and it quickly spread to other non-Qur'anic texts (al-Dānī 1960:11a; Abbott 1972:3, 7–9; Revell 1975:180–181; Talmon 1997:41–42; Versteegh 2014:64), although George notes that they 'are solely attested in secular documents for the third/ninth century

onwards' (George 2015a:13–14). All of the following fragments have an identifiable version of the modern system, although they show variation in the degrees of completeness in their vocalisation. They also vary in their use of letter-form diacritic signs to mark phonetic phenomena like *tašdīd*, *taḥfīf*, *madd*, and *waṣl*.

4.3.1 T-S Ar.19.7

Though only one line of text remains, it includes modern *fatha*, *kasra*, and *ḍamma* signs. There is also a black stroke to indicate lengthening in *fī* and a *šadda* on *al-samāwāt* (Qurʾān 2:255).

4.3.2 T-S Ar.40.97

Partially, but consistently, vocalised, this manuscript has modern black signs for *fatha*, *kasra*, *ḍamma*, *sukūn*, and *šadda*, as well as a vertical length marker on *fī* (v.9). A short horizontal stroke above *alif* may indicate *madd* (v.9). In at least three instances (r.4, r.5 twice), the sign for *tanwīn ḍamm* is comprised of a *fatha* and a *ḍamma*.

A modified *kasra* represents *ʾimāla* in several contexts. In the *basmala* at the beginning of *sūras* 97 (v.8) and 98 (r.2), a thick stroke, angled downward and slightly to the right, sits below the *mīm* in *bism* and below the space between the *hāʾ* and *lām* in *allah*. This right-angled sign replaces a normally left-angled *kasra*, and reminds the reader to pronounce the neighbouring A-vowel with *ʾimāla*: *bismi llēhi rrahmān*, rather than *bismi llāhi*. This 'reversed *kasra*' appears throughout the fragment, usually in the sublinear space between two letters, each time in a place where a *fatha* undergoes some *ʾimāla* by preceding (r.1, r.6 twice, r.9; v.4, v.5, v.11³⁸) or following (r.6³⁹) a *kasra*. Additionally, the *kasra* in *nādiyahu* (Qurʾān 96:17, v.5) is below the *alif*, rather than the *dāl*, possibly indicating *ʾimāla*.

A miniature unpointed *ḥāʾ* indicates *ḥafīf* (non-gemination) for either the *ʾayn* in v.4 or the *lām* in v.5. A miniature *ʾayn* below *tuṭiʿhu* (Qurʾān 96:19, v.6) is an *ihmāl* sign, preventing the reader from mistaking the *sukūn* for an *ʾiḡām* dot and reading *ḡayn* (see Witkam 2015).

4.3.3 T-S Ar.41.84

The only vowel signs in this fragment are a few *fathas* (v.4, v.10, v.11), although there may at one time have been several red dots (e.g. v.12). A vertical red stroke

38 This marking suggests a vocalic reading of the typical *sukūn* in *bi-ʾidni* (Qurʾān 97:4), *bi-ʾidni*.

39 After *baʿdi* (Qurʾān 98:4). This one could instead indicate *ʾimāla* of a preceding *fatha* if *baʿdi* is read without *sukūn* (i.e. *baʿedī*).

once indicates *sukūn* (v.1), while a horizontal red stroke is *šadda* (r.5). The *alif* at the end of *tawāṣaw* (Qur'ān 103:3, v.12) is shorter and superscripted, likely because it has no phonetic value.

4.3.4 T-S Ar.41.93

This fragment is almost completely unvocalised, but it does use a vertical stroke as a length marker for *fī* (r.7) and *'innī* (r.9). Final *kāf* is marked by *hamza* (r.7–8, r.9; r.2 margin; v.3). A horizontal black stroke may indicate gemination (r.6). The words *lil-malā'ika* (Qur'ān 2:30, r.6) are fully vocalised with modern *fatha*, *kasra*, and *sukūn* in red ink.

4.3.5 T-S Ar.41.119

This fragment is fully vocalised with modern vowel signs in brown ink, including *sukūn*, *šadda*, *madda*, *waṣla*, and a length marker for *fī* (v.4). A few words have a second layer of signs in grey ink, including *fatha*, *kasra*, *ḍamma*, and *šadda*, (r.5, r.6), and a larger miniaturised *wāw* for the long vowel in *ḍarabū* (Qur'ān 17:48, r.1). This last sign supersedes the first layer, which (mistakenly?) marked the same word as either *ḍarabawā* or *ḍarabuwā*.

Several *ihmāl* signs appear. A miniature *kāf* above the letter consistently marks final *kāf*, as well as some internal *kāfs* (v.3, v.7). A sublinear miniature *'ayn* clarifies that an *'ayn* with *sukūn* is not *ḡayn* (v.5), and a supralinear miniature *hā'* shows that a *hā'* is not *tā' marbūṭa* (v.6). This last sign is known especially from Qur'ān manuscripts in *muḥaqqaq* script (like T-S Ar.41.119) from the Mamluk period onwards (Witkam 2015:404, n. 51). A small *alif* sits above the final *wāw* in *yaqūlū* (Qur'ān 17:53, r.9), but this addition probably corrects an unintentional omission, as no other *alif* appears in this way.

A curved stroke below the *tā' marbūṭa* in *wasīla* (Qur'ān 17:57, verso 8) resembles a *yā' mardūda*, and may indicate *'imāla*. Additionally, there is a reversed *kasra* between the *lām* and *tā'* of *allatī* (Qur'ān 17:53, r.9), most likely indicating *'imāla* (i.e. *alletī*).

4.3.6 T-S Ar. 42.145

The vocalisation is idiosyncratic to each hand, which suggests that the scribes wrote consonants and vowels simultaneously. Both hands fully vocalise the text with modern *fatha*, *kasra*, *ḍamma*, *sukūn*, and *šadda*. Both also use *waṣla*, but the smaller hand does so more consistently. The smaller hand also makes frequent use of vertical strokes as length markers (F1 r.2, r.3, r.6, r.7), and indicates *'imāla* with modified vertical *kasra* signs (F1 r.1, r.4 twice, r.10).

4.3.7 T-S Ar. 42.193

There is one layer of partial vocalisation in brown ink (F1 v.3–9; F2 r.4, r.9), using modern vowels and *sukūn*. A second layer contains nearly full vocalisation in black ink, including *sukūn*, *madda*, and *waṣla* (F1 v.2, v.13), sometimes overlapping the earlier layer (F1 v.5, v.7).

Sukūn usually looks like an unpointed *nūn*. *Ḍamma* varies between a small *wāw* and a curved stroke, and often appears similar to *sukūn*. Neither vocaliser has a grapheme for *šadda*. The text retains the older diacritical practice of marking final *kāf* with a miniature *kāf*, but the evolution of this sign into the now-standard *hamza* shape has clearly begun. The larger hand represents *waṣla* with a miniature *wāw*, as opposed to the more common abbreviated *šād*.

The third masculine plural pronominal suffix *-hum* is often extended to *-humu/humū* with a *ḍamma* (F2 v.2; F2 r.6, r.9) or *wāw* (F2 v.9). Al-Dānī attributes this practice to the people of Medina and the Maḡrib (al-Dānī 1960:4b; George 2015a:11).

Red dots mark verse divisions. A yellow dot above and a green dot below (F2 v.7) may offer variant readings of *nūḥī* (Qurʾān 21:25): either *nūḥā* or *nūḥī*. The later vocaliser placed a *fatha* in accordance with the former reading. It is also possible that some combination of these dots indicated an ultra-long vowel. There is a blue dot (F1 r.5) below the *nūn* in *qurʾān^{an}* (Qurʾān 20:113), which may be a reminder of *tanwīn* (*-an*) after *-ān*.

4.4 The Maḡribī System

The ‘*maḡribī*’ vocalisation system is not ‘modern,’ at least not in the sense that it sees common use today. However, it is also not a red-dot system. It may be a parallel development to the modern system or a *maḡribī* modification of the more ‘standard’ signs (Déroche 2003). In this system, a horizontal supralinear red stroke represents /a/, a horizontal sublinear red stroke represents /i/, and a small supralinear red *wāw* represents /u/. A supralinear red circle indicates *sukūn*, and a miniature *dāl* indicates gemination. According to al-Dānī, this *dāl* sign is from the final letter of *tašdid* (gemination),⁴⁰ [footnote disappears?] and its use in the Maḡrib follows the practice of Medinan vocalisers (George 2015a:8; al-Dānī 1960:24a).

40 This derivation would contrast most of the other diacritical letters, which were typically the first letter in a phonological phenomenon (*šadda* –> *sīn/šīn*; *šila/waṣla* –> *šād* or *wāw*; *ḥafif* –> *ḥāʾ*). A miniature *sīn/šīn* sign was probably already in use to distinguish *sīn* from *šīn* (Revell 1975:180–181). See also, Witkam 2015.

4.4.1 T-S Ar.38.64

This fragment is fully vocalised with the *maḡribī* system, using horizontal red strokes for /a/ and /i/ and a small supralinear *wāw* for /u/. This last sign often appears as just a curved stroke. Two strokes or two *wāws* indicate *tanwīn*. *Sukūn* is a red circle, but some have blurred and look like solid dots.

A supralinear upward-facing red *dāl* marks *tašdīd* with /a/, and a sublinear downward-facing *dāl* marks *tašdīd* with /i/. *Tašdīd* with /u/ is never marked. A longer horizontal red stroke denotes *madda* on *alif* (F2 v.1, v.4). *Hamza* is written in the same ink as the vocalisation, and *alifs* that are normally omitted have been inserted as full letters in red ink (F1 v.1; F2 v.4, v.5). A horizontal red stroke through the lower third of an *alif* indicates *waṣl* when the preceding vowel is /i/ (F1 v.1, v.4 twice; F2 r.6 twice).

In several instances, the two strokes of *tanwīn fath* are black instead of red (F1 v.6, v.7; F2 v.5, v.6). It seems that the scribe who wrote the consonantal text reflexively added *tanwīn* strokes to some *alifs*, rather than waiting for a second pass with red ink.

5 Conclusion

No aspect of the palaeography, orthography, or vocalisation of these eleven fragments distinguishes them from other 'personal-use' Qur'āns of the medieval Islamicate world, and no single physical feature connects them to each other. In fact, despite all being stored in the same synagogue, these manuscripts show a wide range of Arabic styles from different time periods (c. tenth—nineteenth century), including Abbasid, *maḡribī*, *nashī*, *muḥaqqaq*, and *tuluṭ* scripts with a mix of vocalisation systems. The only detail that unites the fragments is their content: they all mention biblical figures or non-Muslims.

Seven of the eleven fragments refer to one or more biblical figures, including T-S Ar.38.8 (Noah; Qur'ān 11:43–50), T-S Ar.38.64 (Moses and Pharaoh; 79:15–26), T-S Ar.40.177 (Saul; 2:246–247), T-S Ar.41.93 (Adam; 2:29–34), T-S Ar.41.119 (David; 17:55),⁴¹ T-S Ar.42.145 (Elijah and Lot; 37:121–137),⁴² and T-S Ar.42.193 (Adam; 20:115–123).

41 Although not in the fragment, the rest of this *sūra* refers to Moses, Jerusalem, the children of Israel (vv. 2–5); Noah (v. 17); and Adam (v. 61).

42 Given that verses 12–64 and 121–138 of *sūra* 37 are extant, this manuscript must have contained verses 75–120, which mention Noah, Abraham, Isaac, Moses, and Aaron. The next section after the extant text tells the story of Jonah (vv. 139–147).

Two fragments contain parts of chapters that would refer to multiple biblical prophets if the manuscripts were intact. T-S Ar.19.7 is a badly torn fragment of *Āyat al-Kursī* (Qurʾān 2:255), but part of verse 254 is also visible, and presumably it once contained more verses. Surrounding *Āyat al-Kursī*, verse 254 is about the *kāfirūn*, verses 246–251 tell the story of Saul, David, and Goliath, and verse 258 references Abraham. Meanwhile, T-S Ar.38.39 only contains Qurʾān 18:10–27, but the rest of the *sūra* is tales of prophets, including Adam (v. 50), Moses (vv. 60–78), and the story of Gog and Magog (vv. 83–101).⁴³

The two remaining fragments do not mention any biblical figures. However, T-S Ar.40.97 has two references to *aḥl al-kitāb* (Qurʾān 98:1 and 6), ‘the people of the book,’ discussing their scripture (i.e. the Bible). Finally, T-S Ar.41.84 includes all of *sūra* 109, *al-Kāfirūn*. It explains what believers should say to nonbelievers, and the final verse reads: ‘For you is your religion, and for me is my religion’ (*lakum dīnukum wa-liya dīnī*, Qurʾān 109:6).

We can thus draw two conclusions from the presence of these fragments in the Ben ‘Ezra Synagogue genizah. First, while it was already known that some medieval Jews engaged with the Qurʾānic text through Judaeo-Arabic,⁴⁴ it is now clear that some also owned and read parts of the Qurʾān in Arabic script. Second, it seems highly likely that they owned certain Qurʾān manuscripts and stored them in the Genizah specifically because they contained passages about non-Muslims and biblical figures.

However, it remains uncertain whether those same Jews owned or stored parts of the Qurʾān that were *not* related to these topics. If they did, those manuscripts are not represented in the T-S Ar. collection.

Acknowledgments

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43 See Genesis 10 and Ezekiel 38.

44 E.g., T-S Ar.51.62.

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